Traffic Safety

SEPTEMBER 1961

HOW CLOSE IS TOO CLOSE?

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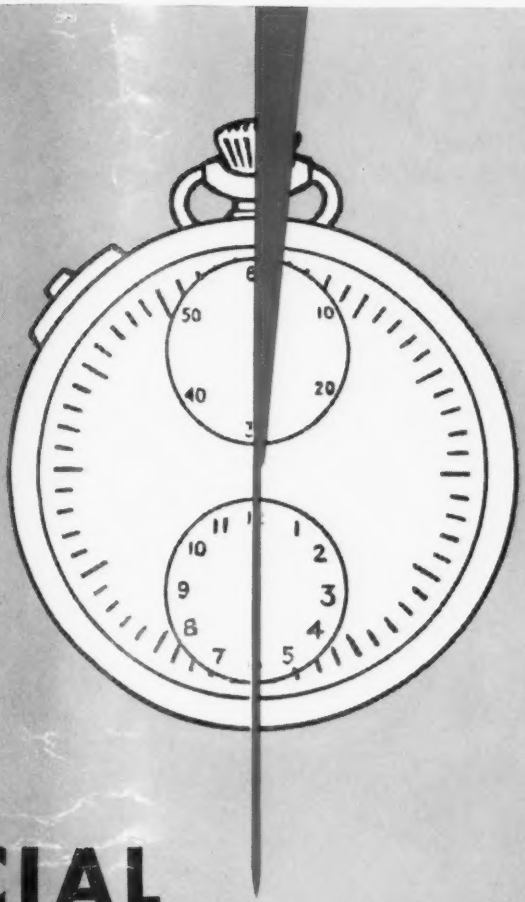
A NATIONAL SAFETY COUNCIL PUBLICATION



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THE SAFETY LIBRARY

(Monthly supplement to *Guide to Traffic Safety Literature*. Guide is available from NSC.)

by Lois Zearing, Librarian, NSC

Accidents

Annual Report—Oklahoma Department of Public Safety. 1960. Illus. Charts. Department of Public Safety, Fourth & North Walnut, P. O. Box 1826, Oklahoma City, Okla.

Chicago Traffic Accident Facts, 1961 ed. Citizens Traffic Safety Board, 20 N. Wacker Drive, Chicago 6, Ill.

Deadly Reckoning. 1961. 29pp. Tables. Illus. The Travelers Insurance Companies, Hartford, Conn.

The Traffic Law They Can't Enforce. Alfred Balk. *Home & Highway.* Summer 1961. p26-29.

Advertising

The Out-Door Story. 2nd ed. 1961. 68pp. Outdoor Advertising Association, 24 West Erie St., Chicago, Ill. (Traffic safety p44-61)

Alcohol

Drinking Drivers. *The Journal of the American Medical Association.* May 20, 1961. p637. (Letter to the editor.)

Automation

The "Why" and "How" of Automatic Train Operation. Franklin George. *Metropolitan Transportation.* June, 1961. p44-48.

Belts

Fasten Your Seat Belt! George C. Stewart. *American Youth.* July-August, 1961, p19.

Interest In Seat Belts Is Revived. *Automotive News.* June 26, 1961, p18, 21.

Seat Belts May Save Your Life. *The California Highway Patrolman.* June, 1961, p43.

Women's Crusade For Seat Belts Is Launched. *Traffic Engineering.* June, 1961, p21-22.

Bicycles

Bicycle Safety Program. 1961. 38pp. Illus. charts, forms. Missouri Department of Safety Education, Board of Education Building, 1211 McGee St., Kansas City 6, Mo.

Conferences

Proceedings: Buckeye Traffic Safety Attack Conference, Nov. 1, 1960. 69pp. Illus. Governor's Traffic Safety Committee, 240 Parsons St., Columbus, Ohio.

Proceedings: 1960 Northwest Highway Engineering Conference. 1960. 255pp. Illus. charts, tables. Engineering Experiment Station, Oregon State College, Corvallis, Oregon. (Circular No. 27.)

Drivers and driving

Auto Driver Fitness: An Evaluation Of Useful Criteria. John L. Benton and others. *The Journal of the American Medical Association.* May, 1961, p420-423.

Better Drivers Save Cities Money. W. L. Robinson. *The American City.* June, 1961, p112-114.

The Case of the Negligent Driver. *Traffic Digest & Review.* June, 1961, p16-19, 32. (Based on the California study—Part I Characteristics of Negligent Drivers.)

Driver Training School Is Profitable Venture for Louisville Taxi & Transfer. *Taxicab Industry/Auto Rental News.* June 1961, p9.

A "Little United Nations" on Campus.

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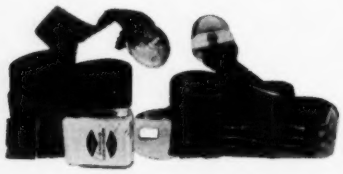

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Traffic Safety

Volume 59 Number 3 September 1961

A NATIONAL SAFETY COUNCIL PUBLICATION

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TRAFFIC SAFETY is dedicated to the prevention of traffic accidents through the presentation of objective information and responsible opinion to official agencies, public support groups and the motor transportation industry. The views expressed do not necessarily reflect the beliefs or policies of the National Safety Council, but they are presented in the conviction that the pressing social problem of traffic accidents can best be resolved through freedom of expression and open debate.

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BETWEEN STOPS

"CAUTION, Speed Trap Ahead!" Signs like this pop up from time to time along the nation's highways. They are the work of irate motorists who are angered by what they consider sneaky law enforcement.

Recently, to keep pace with radar patrolling, a new twist has been added to "speed trap" warning systems. Now, the would-be violator can get his tip-off electronically, thanks to a gadget that detects radar's presence at a "safe" distance. The device warns the motorist by an audible beep that the area is radar patrolled. Then the proud owner of the device, who may have been sailing along with abandon at 80 or 90 m.p.h., can reduce his speed to the stated limit until his handy alarm indicates that the danger of law enforcement is past. He may then resume speeding.

Perhaps the next "improvement" will be a device that will jam the radar signal so that it won't even be necessary to periodically obey the law.

June Toll Down Slightly

First Six Months' Death Rate Lowest Ever

by H. Gene Miller

MOTOR VEHICLE deaths in June totalled 3,110. This was a 3 per cent decrease from the June, 1960 total of 3,210.

For the first six months of 1961 deaths totalled 16,980, down 1 per cent from the 17,170 total for the same months in 1960.

Travel for the first six months is indicated to be about 1 per cent ahead of last year. This increase, coupled with the 1 per cent decrease in deaths, produced a mileage death rate of 4.8 (deaths per 100,000,000 vehicle miles). This is the lowest death rate on record for this period, and compares with 5.0 for the same months of 1960.

Disabling injuries during the first six months of the year are estimated at about 600,000. These are injuries resulting in disability beyond the day of the accident and do not include minor injuries which undoubtedly total hundreds of thousands more.

H. Gene Miller is director of the National Safety Council's research and statistics department.

Traffic Summary

	1961	1960	Change
June			
Deaths	3,110	3,210	—3%
Six Months			
Deaths	16,980	17,170	—1%
Mileage (billions)	351	347	+1%
Death Rate	4.8	5.0	—4%

Among 49 states reporting June experience, 28 had fewer deaths than last June, one reported no change and 27 had increases.

For six months 27 states showed decreases and 22 had increases.

Cities experienced a 7 per cent decrease in June, according to reports from 744 cities over 10,000 population. For six months, these cities showed a 6 per cent decrease.

Cities with fewer deaths in June totalled 134, compared with 138 having more deaths, 472 showed no change (mostly perfect records).

For six months, 255 cities had decreases while 266 had increases, with 223 showing no change.

In June, 534 of the 744 cities reporting had perfect records. Of these the three largest were: Pittsburgh, Pa. (604,300), Seattle, Wash. (557,100), and Norfolk, Va. (305,900).

For six months 265 of the cities still had perfect records. Of these the three largest were: South Bend, Ind. (132,400), Allentown, Pa. (108,300), and Lynn, Mass. (94,500).

The three leading cities in each population group at the end of June, ranked according to the number of

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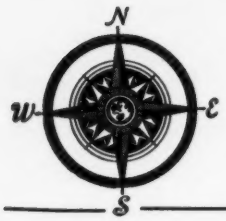
Leading at the End of June

States

Alaska	—50%	Florida	— 8%	Charlotte, N. C.	— 71%
Delaware	—37%	Missouri	— 8%	Washington, D. C.	— 58%
Maryland	—26%	Georgia	— 8%	Kansas City, Mo.	— 56%
North Dakota	—26%	Kentucky	— 8%	Cleveland, Ohio	— 45%
New Hampshire	—24%	Massachusetts	— 7%	Buffalo, N. Y.	— 44%
Ohio	—22%	South Dakota	— 7%	Albuquerque, N. M.	— 40%
Pennsylvania	—18%	South Carolina	— 6%	Cincinnati, Ohio	— 39%
Mississippi	—18%	Tennessee	— 5%	San Antonio, Tex.	— 38%
New Mexico	—18%	Washington	— 5%	Memphis, Tenn.	— 38%
Louisiana	—16%	North Carolina	— 4%	Richmond, Va.	— 38%
Hawaii	—14%	Indiana	— 3%	Akron, Ohio	— 33%
Utah	—12%	New Jersey	— 1%	Dayton, Ohio	— 31%
Vermont	—12%	Alabama	— 1%	Baltimore, Md.	— 30%
		Arizona	— 1%	Pittsburgh, Pa.	— 27%
				Phoenix, Ariz.	— 26%

Cities

Atlanta, Ga.	— 24%
San Francisco, Calif.	— 20%
Dallas, Tex.	— 20%
Indianapolis, Ind.	— 14%
Long Beach, Calif.	— 13%
Syracuse, N. Y.	— 13%
New York, N. Y.	— 12%
Los Angeles, Calif.	— 12%
Oklahoma City, Okla.	— 12%
Philadelphia, Pa.	— 10%
Detroit, Mich.	— 8%
Portland, Ore.	— 8%
Oakland, Calif.	— 8%
Mobile, Ala.	— 8%
San Jose, Calif.	— 6%
New Orleans, La.	— 5%



Today's Traffic

Confusing, isn't it?

To keep speeders from spotting patrol cars too easily, police in Leicestershire and Rutland, England, have been doing a re-paint job on their cars. Now the heavy-footed driver not only has to keep an eye peeled for the familiar black car with the word "Police" printed in bold letters, he must also watch out for red, green, grey and other colored vehicles. Some think it's not quite cricket.

Combine fun and safety

Michigan motorists logged an estimated 700 million miles during the Fourth of July weekend, but it was one of the safest holiday weekends in recent Michigan history. The fatality rate was 1.7 per 100 million vehicle miles compared to a year-around average of 4.7 per 100 million miles.

"Light-up" idea spreads

Texas' holiday "Drive Lighted and Live!" campaign has caught fire in other states. Over the Fourth of July weekend, Nebraska and Illinois drivers were also urged to turn on car headlights during daytime hours to signal that they were driving legally and safely—and to remind other motorists to follow suit. Texas first tried the idea over the Labor Day holiday in 1959.

A million questions

The Florida Department of Public Safety has distributed a million question-and-answer pamphlets explaining its new birth-month issuance of driver licenses which is effective September 1. Pamphlets were circulated through outlets such as county judges' offices, highway patrol stations, service stations and principal grocery and shopping center locations.

Driver ed pays off

The first report on Oregon's study comparing driving performance of trained and untrained young drivers has been compiled. It discloses that male licensees with 30 hours of classroom and six hours behind the wheel have 21 per cent fewer violations and 13 per cent better accident records than those without driver education. Female licensees with driver education have 30 per cent fewer accidents than the untrained.

Added incentive

Chrysler Corp. has further reduced the price of seat belts to its dealers from $6.35 to $5.55. At the time the new price cut was announced, the company said that more than 30,000 seat belts had been ordered by dealers since Chrysler's initial offer to make belts available to dealers on a non-profit basis.

For the cows

The Vermont Senate has passed a bill which provides that when a new highway project cuts off cows' routes to pasture, the state will build special underpasses for them.

Let's train drivers for that

LAST CRUCIAL MOMENT

by Alfred L. Moseley

EMERGENCIES happen fast. When sudden danger looms on the highway, the driver has no time to analyze the situation and take deliberate action. He must act quickly, and—if he is to survive—he must act wisely.

But his chances of doing the right thing on the spur of the moment are slim if he is coping with a situation for the first time. They would be much better if he had deliberately trained himself to handle such a situation long before the emergency arose. Such deliberate previous practice would make it possible for him to bring the skill to the occasion of need.

Anyone who is a private pilot, or who on occasion flies in scheduled domestic passenger airlines, is well aware that there are many types of emergencies which face the pilot in the air. If a pilot fails to meet these with skill and competence under conditions of short intervals of time and multiple negative factors influencing his status, he soon learns that the sky is very unforgiving of errors. The pilot who does not know how to recognize a change in attitude that brings an aircraft into a stall position is headed for destruction.

The driver untrained for an emergency is in an equally dangerous position.

Beset by Hazards

There is no area in the United States in which a driver is free of the problem of skidding, under some conditions, at some times of the year. Also, no matter how carefully he drives, he is on the receiving end of emergency situations set up by other persons. In such situations, the desirability of making a panic stop with skill is often urgent. Tire failure is another emergency he may encounter. Tire failures under some circumstances run their course with great rapidity. In other circumstances they operate more slowly, but in the course of doing this, change the dynamic handling characteristics of the vehicle.

Spotting any of these situations when they are in the early stages makes it possible for the driver to exert maximum control of his vehicle—*if he is properly trained.*

At a national meeting in 1954, I made a series of recommendations for emergency training of drivers. The list included seven items.

At the end of my presentation some important persons suggested that I was crazy—that these proposals were very much out of line. They thought the idea of performing an experimental blowout at a predetermined speed level was ridiculous, and that such an experiment would subject a student to needless danger. Other items in the list were similarly interpreted.

At a meeting of the same group in 1959, I repeated the same basic suggestions, with a notation that on the matter of deaths occurring under conditions of blowouts, about 1,600 persons had died in the intervening period—a fact that argued strongly for the advisability of training drivers to meet emergencies. They were again unconvinced.

However, at the recent national meeting of the teachers of driver education in Miami, the point of view here described was presented. The reactions varied, but it was impressive to hear questions regarding published guides for the teacher's use. Unfortunately such training materials do not exist at the present time. This must be accomplished soon, so that the student of driver education can meet an emergency with an accomplished skill.

I do not intend to suggest that any of the ideas I am about to present be taken directly to the street or the proving ground or whatever strip is used for practice driving. The question is rather one of attempting to exert influence on your thinking concerning the philosophy of safety at a primary level. The question also involves helping to orient persons interested in research in an area in which practical working tools need to be designed and manufactured. Procedures must be worked out to go along with the instruments. Teaching techniques must then be added.

The original list of seven items has now expanded. The expansion has come in the course of my work with a multi-disciplinary team in Harvard Medical School whose job it is to deal exclusively with the many factors which are involved in automobile deaths. In exhaustive analysis of the many factors involved in the collision course, evidence indicates that more skillful handling of the emergency could contribute strongly to survival. The driver often does the wrong thing and is never aware of it. In other cases he does the right thing but it is too late to be effective. The answer to both of these situations is deliberate practice to develop the skill for the occasion of need. The list at the present moment includes 25 items. The list will be expanded further as our cases accumulate.

Feasible Steps

Some steps in emergency training can be taken now. These are steps that most driver training instructors know or could work out for themselves.

1. **The soft tire.** It is easy enough to set up a simple situation in which one of the tires either on the front or the rear of the vehicle has 10 pounds of air in it and allow the driver to travel at low speeds to get the feel of the situation. Obviously much driving of this sort is going to damage the tire, so a special one should be used for the purpose and watched carefully for evidence of failure.

2. **Brake pedal loss.** Under some conditions the brake pedal shows a sign of a slow brake loss. You have experienced a mushy and spongy pedal where you have low fluid in the system or a leak in a wheeel cylinder. This happens also when the adjustment of brakes is not up to standard. One of the important things here is to teach the person how to recognize that the feel of the pedal itself is not right. This is not to suggest that the person should be asked to operate a vehicle with defective brakes. The point is to teach him how to recognize, by applying pressure to the brake pedal, that something is wrong with the braking system.

It is recommended that the person be taught how to stop the vehicle with the use of the hand brake. Under conditions of massive brake failure which occurs while the vehicle is in motion, the possibility of stopping is dependent upon the hand brake and upon having a clear area ahead. The hand brake is certainly going to operate at something less than half braking efficiency in many conditions. If the hand braking system is not in good condition, then the driver is in terrible trouble. To think of the hand brake

Alfred L. Moseley is chief investigator, research on fatal highway collisions, department of legal medicine, Harvard Medical School.

as a way out requires much practice. To teach the driver from the beginning how to use the hand brake as a means of stopping the vehicle is to provide him with a skill which is extremely important.

3. **Ignition loss.** On some occasions the operator of a vehicle will lose the ignition while in transit. This can be simulated very easily. While the student is driving in a normal fashion, the instructor can shut off the ignition switch. The task for the driver would be to determine that this had happened and to leave the travelled part of the roadway as quickly as possible in order to avoid obstructing traffic, and exposing himself to collision.

4. **Protecting the scene.** Protecting the scene of an accident means giving warning to vehicle operators coming in both directions that there is trouble in the road ahead and that it should be approached with extreme care. Staking out the vehicle with flares, fusees, flashers or flags is required. Distance from the vehicle must take speed into account. The standards of the Interstate Commerce Commission for vehicles transporting cargo and passengers across state lines would appear to be basic standards for the teaching program. Protecting the scene has to do both with an accident and with the condition of vehicle failure.

Changing a tire on the traffic side of a vehicle is in many circumstances a very hazardous situation, and the hazard is increased because the person who is doing the work has no protective equipment to use. He has no means of giving other vehicles warning that he is vulnerable. When this problem occurs at night, the operator, while changing the tire, may occlude the view of taillights by lifting the trunk lid or standing in the way; or some passenger may do this. The means by which other drivers come to know that the lane is occupied is completely lost.

The driver should be well versed in all these procedures.

5. **Sign reading.** Sign reading is a far more important matter for many circumstances than is generally realized. A great deal has been done on legibility, and on minimizing the language and the number of ideas presented to the driver at one time. The traffic engineering profession has contributed notably to these matters. The accomplishments are occasionally completely lost when a piece of roadway is either in construction or in reconstruction. Temporary signs, signals and markers are put out. Learning how to interpret these changes and how to make sensible judgments based upon them is a very important matter to the driver.

6. **Inspecting the vehicle.** One of the most important basic areas in which sound and practical training can be given is on procedures for inspecting the vehicle. Mechanical failures are widely believed to be a negligible part of the highway collision problem. A part of this belief is due to the fact that in the aircraft industry very sound and dependable studies indicate a large component of pilot failure in aircraft accidents. The translation from the aircraft field to the highway field is made almost directly, except that the role of human failure factor is upgraded. Many authorities estimate that 90 per cent or even 95 per cent of the highway accident problem is due to human failure. This could hardly be further from the truth.

When you assume that the problem is all human failure, you make the extreme error of not looking elsewhere to find what may be wrong. Such an error was made by the investigators of a series of aircraft accidents involving one type of aircraft. The investigation of the first two accidents in the series proceeded under an implicit assumption that the aircraft was completely sound in structure and maintenance. When another craft of this type went down, it was found that the aircraft had hit the earth at a speed in excess of 600 m.p.h. with one wing missing. The matter was then subjected to a complete re-inquiry because now the question of some deficiency either in the design or the assembly of the aircraft was brought into play. The assumption that had dominated the investigation of the cases up until then had to be revised and the accidents had to be investigated again.

In the highway field we assume that human failure is the nearly complete problem and we do not look at the rest of the situation. Our published reports in this field are accurate insofar as data are reported, but they are completely inadequate because systematic investigation of the vehicle is not carried out by any public agency in any state in automobile accidents. Therefore it is extremely important in principle to teach students how to look at each component in the steering system and test it for adequacy. Students should learn where the weak parts are, where connecting mechanisms that can become loosened or disconnected are located, which parts are fragile in design and subject to failure. Tires are extremely important. Each component in the exhaust system, from the manifold all the way to the end of the tailpipe, needs to be inspected regularly.

Many other things could be added to this list. Wouldn't it be helpful to know how much play in the steering wheel is too much—how much brake pedal travel is normal and how much is excessive? Don't you think that a standard list of items of emergency equipment would help people meet a minimum standard of equipment for various operational needs? Do you know what a muffler looks like when it's defective? A systematic step-by-step examination of the vehicle on frequent occasions is extremely important in keeping the driver alive. You may add to this list very easily on your own initiative. Compulsory inspection required by the state is not a substitute for the responsibility of the driver to inspect his own vehicle.

7. **Deceleration protection.** We have estimated in our cases at the Harvard Medical School that a large number of persons who are killed are on the receiving end of missiles which go out of control and cross into the driver's path.

In one of our recent cases three persons were travelling northbound on a four-lane divided highway. They were all sitting in the front seat. Without warning the vehicle went out of control, crossed the median, and then entered the southbound lanes. The driver of a heavy vehicle going in the opposite direction observed the vehicle while it was in the median and realized that it was coming into the lane. The driver hit his brake and left skid marks for a very short distance, while making a very slight turning movement of avoidance. His reactions appeared to be excellent under these conditions. He was on a

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DRIVER REGISTER NOW IN OPERATION

ON JUNE 30, Secretary of Commerce Luther H. Hodges inaugurated the operation of the National Driver Register Service—a file on motor vehicle operators whose driving privileges have been withdrawn for driving while intoxicated or for conviction of a violation involving a traffic fatality.

Many problem drivers who lose their licenses apply for new licenses in a different state, omitting information about their previous state of residence or driving history. To combat this problem, Congress established the National Driver Register Service to help states and territories compare records on drivers whose privileges have been withdrawn because of (1) drunken driving or (2) involvement in a fatal accident. Responsibility for this service is vested in the U. S. Department of Commerce, Bureau of Public Roads.

Many states have been exchanging driver records with their neighboring states. The National Driver Register Service will make this exchange nationwide and will complement the license records in the 55 states and territories. It establishes a central file where a driver's history may be quickly checked instead of searching 54 other files.

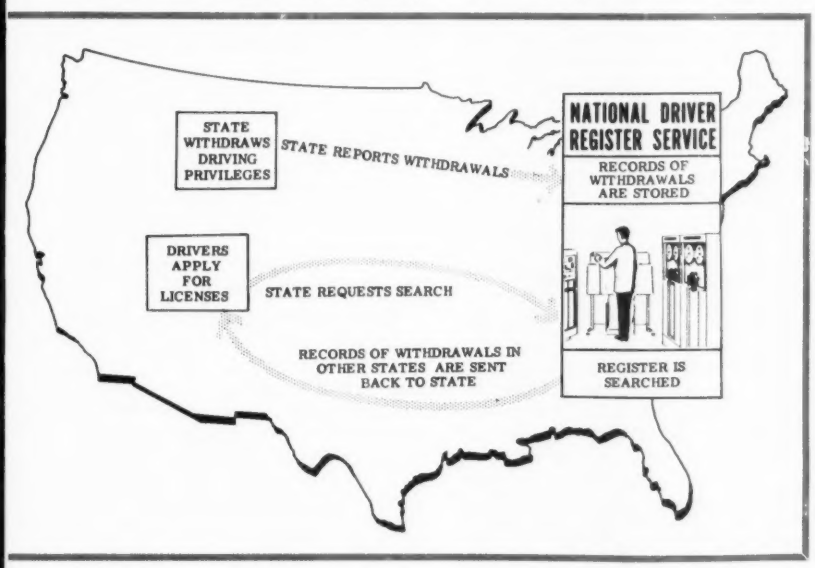
The major functions of the National Driver Register Service are:

1. To maintain a file or register of withdrawn driving privileges reported.
2. To update the register daily on the basis of withdrawal and reinstatement reports from states and territories.
3. To search the register promptly on request and report the result.

The driver register will provide prompt and reliable data compatible with state procedures and records. However, this service will be effective only to the extent that states, territories, and the federal government cooperate.

States and territories send reports of withdrawals of driving privileges to the service. The reports are processed through an electronic computer system into the register, which is updated daily as additional data are received.

States and territories may request a search of the register for withdrawals a driver may have had in another jurisdiction. The request for search is entered into the computer system and when a report is found that covers the same driver, a probable record "match" is made. Several matches may be found (for example, there are many John Smiths) and specially trained employes select the most probable matches.


STATE WITHDRAWS DRIVING PRIVILEGES
STATE REPORTS WITHDRAWALS
NATIONAL DRIVER REGISTER SERVICE
RECORDS OF WITHDRAWALS ARE STORED
DRIVERS APPLY FOR LICENSES
STATE REQUESTS SEARCH
RECORDS OF WITHDRAWALS IN OTHER STATES ARE SENT BACK TO STATE
REGISTER IS SEARCHED

These are then reported to the inquiring state or territory. With this information, the state or territory can contact the jurisdiction that withdrew the driver's privileges and obtain its summary of the driver's history. In this way, complete information can be readily obtained regarding the status of the driver's operating privileges—such as additional revocations, suspensions, records of convictions, accidents, etc.

If desired, the driver register will send to the state or territory that withdrew the driving privileges a copy of the match that is sent to the jurisdiction requesting the search. Then the withdrawal state may immediately forward its summary data on the subject driver to the inquiry jurisdiction.

The National Driver Register Service will accept all media of data transmission, including manually prepared forms, punched cards, punched paper tape, and magnetic tape. The driver register will provide, without cost, the forms to be used by the states or territories for reporting withdrawals and requesting searches.

Once the operation gets into full stride it is expected that records will be received on about 1,000 names daily and requests for searches could well average 20,000 a day. High speed electronic data processing equipment is being used to handle the records and inquiries.

Director of the Driver Register Service is Wendell G. Eames, who came from the Federal Bureau of Investigation to the Bureau of Public Roads for this assignment.

In inaugurating the program, Secretary Hodges said that the federal government is not entering either the driver licensing or the traffic law enforcement fields. He emphasized that the program is a purely voluntary, cooperative state-federal enterprise.

HOW CLOSE IS TOO CLOSE?

A realistic approach to the question of safe following distances

by Stuart Wright and Robert B. Sleight

HOW closely a driver should follow the car in front of his in order to combine both reasonable safety with reasonable speed remains a question for American traffic authorities. Traffic engineers want vehicles to move as close together as possible, thus using our highways to maximum capacity. On the other hand, safety experts want vehicles as far apart as possible in order to prevent accidents.

Both points of view seem equally unrealistic to the average American driver—bumper-to-bumper driving appears to be too dangerous, while maximum distance is impractical because of cutting in by other cars.

Present Driving Habits

Following distance concerns everyone who drives—and as the situation now stands, everyone has to settle the matter for himself. Police attributed about 14 per cent of all American automobile accidents in 1959 to "following too closely." Poor judgment of following distance was also a probable factor in some of the accidents in such other categories as "improper overtaking," "speed too fast," and "made improper turn." Also, it appears relevant that Ohio Turnpike authorities report that three-fourths of all accidents involving two or more vehicles in 1958 and 1959 were rear-end collisions.

Dr. Sleight is president and Dr. Wright is a program director of the Applied Psychology Corp., Arlington, Va., a research organization specializing in traffic safety research.

What Authorities Say

What advice do various authorities give on how far you should stay behind another vehicle, and how well does this advice work?

The well-known "rule-of-10" requires the driver to drop back one car length for each 10 miles of his speed—four car lengths at 40, five at 50, and so on. Many safety organizations advocate this rule, which has the advantage of being easy to remember.

If you have ever actually given this rule a careful trial, you probably had trouble in estimating a particular number of car lengths by eye alone.

Most people are surprised at how close they are when using the rule-of-10. Far from being a safety measure that results in greater following distances than most people now use, the rule-of-10 requires shorter distances.

Investigation has shown that at speeds of 30 m.p.h. and above, the average driver actually uses a greater (and, presumably, therefore a safer) following distance than the rule-of-10,

and he uses an added margin of safety at higher speeds.

If drivers could be convinced of the value of the rule-of-10, highways would be used more efficiently, and drivers would get where they want to go more quickly. Which, then, is correct—the "rule" or the average driver? Should one conquer his feelings and try to drive closer than he ordinarily does?

The answer depends not only on a knowledge of the principle behind the rule, but also on the serious assumptions that have to be made about the driver and driving conditions.

Determining Factor

The rule is based entirely on one factor—the length of time it takes a driver of a typical American car to get his foot off the accelerator and onto the brake pedal after he has noticed that the car in front of him has started to slow down. This *brake reaction time,* as it is called, varies from person to person, but averages from one-half to three-quarters of a second. It is measured from the moment the driver releases the accelerator to the moment he depresses the brake pedal. The distances allowed by the rule, at any speed, give you a little more than one second to hit the brakes after noticing that the driver in front has hit his. This is roughly twice as much time as the average person needs. It is essential to realize that by following this rule you will avoid a collision only if:

1. Your brakes are as good as those of the driver ahead;
2. You are alert;
3. The other driver does not come to a sudden or collision stop;
4. The pavement surface is uniformly dry;
5. Your brake reaction time really is one second or less, and
6. No one cuts in ahead of you.

Assuming you are unwilling to accept all of these "ifs," you are in the company of most traffic authorities, who feel there are too many contingencies, and that the higher the speed the greater the margin of safety required. Accidents involving high speed are more serious than those at low ones, but the rule-of-10 makes no allowance for this.

Many authorities therefore recommend following distances which make greater allowance for various kinds of difficulties. For example, the State of Virginia requires license applicants to memorize a table of distances composed of both brake reaction times and actual braking times. At 55 m.p.h. the combined figure comes to 216 feet, or 128 feet more than the rule-of-10 allows. The New York State Thruway Authority suggests a distance of about three times the distance the rule-of-10 allows.

The most conservative recommendation comes from the Bureau of Public Roads of the Department of Commerce. At 60 m.p.h., this recommendation would have the driver following 365 feet behind the lead car —about four times the allowance of the rule-of-10.

To expect all drivers to maintain separations of 300 or more feet on modern high-speed thruways in heavy traffic is to expect the unlikely. Such distances invite cutting in, and therefore force the driver who is trying to observe these conservative recommendations further back in the stream of traffic.

Calculated Risk

What rule should you follow, if the rule-of-10 seems too close for safety and the other recommendations seem impractical? The answer depends on your own choice of a personal "safety factor." There is no such thing as 100 per cent safety, no matter what rules you use for driving. Since most driving nowadays is done under conditions which are far from ideal, you must decide how much risk you are willing to take.

You can reduce the risk from a car ahead by increasing the distance between that car and your own when traffic is light or when there is more than one lane in each direction, or under other conditions which tend to eliminate cutting in.

Under high-density driving conditions, particularly during rush-hour commuting, it is impossible to increase following distance to a theoretically safe amount. Even the rule-of-10 becomes impossible on high-speed urban thruways such as those around Detroit. There, the average distance between cars in groups (platoons) was found to be one-half second, or half the distance required by the rule-of-10, at average speeds of 45 to 50 m.p.h. Yet on these heavily used Detroit freeways, there is an average of less than one rear-end accident per day, and these accidents almost never result in fatalities.

It appears, therefore, that none of the recommendations of authorities is practical under all conditions. At the same time, this does not mean that it is impossible to drive safely without following a "safety recommendation." Where drivers are thoroughly familiar with the route and there are few interferences, there are relatively few accidents under rush-hour commuting conditions. Driving in such traffic permits distances no greater or even less than those allowed by the rule-of-10.

How well, then, will the rule work under non-rush-hour conditions, on rural high-speed thruways? The answer depends on some more "ifs." The rule-of-10 will prevent your hitting the car in front of you under such conditions if:

1. The visibility is at least 300 feet;
2. There are no intersections;
3. You are alert, and
4. The traffic is not so heavy that cutting in occurs too frequently to permit maintenance of the rule-of-10 distances.

More Distance Needed

Few people drive nowadays with defective brakes. Also, it is highly unlikely that another driver will cut in at the exact moment that the driver in front of you puts on his brakes.

However, if any of these conditions does not hold, the chances of a collision-stop by the lead car, or slowness in applying your own brakes, are increased. Fog, rain, darkness, intersections, curves and hills, unfamiliarity with route, and driver inattention all require an increase in vehicle separation beyond that required by the rule-of-10. Of all these, the most important is probably driver inattention. Without driver alertness, all of the

highway signs, rules, and other devices to prevent accidents are largely worthless.

The discussion has concentrated thus far on the problem of deciding on appropriate following distances. How well can you estimate the correct number of car lengths between two cars when both are in motion?

Little Help

Surprising as it may seem, only one of the various authorities who have been advising motorists how far they should drive behind another car has given him any help in estimating this distance. This one exception is the New York State Thruway Authority, which has issued a leaflet stating that drivers should keep two delineators apart, a distance of 264 feet, at 60 m.p.h. (Delineators are the small reflectors mounted on posts along the right shoulder of the thruway.) This distance should be doubled in bad weather, according to the Thruway Authority. Our previous discussion has shown how unlikely it is that the average driver will wish to follow, or be able to follow, this recommendation when traffic is heavy. However, it is a step in the right direction, at least in that it gives a distance-estimating aid to the motorist, and helps in maintaining the distance he has decided upon.

You can try a few experiments yourself, with the help of a friend and a measuring tape or yardstick. With your friend's car parked in front of yours, position your car behind at what you estimate to be following distances of two, four, and six car lengths. Every time you decide you have reached one of these distances, have your friend make a chalk mark on the curb. It is best not to get out of the car yourself to do this checking until you have estimated all three distances, because doing so may artificially reduce your error. Now check your estimates with the tape.

Unless your car is a compact, your marks should measure about 32, 64, and 96 feet from the front bumper of your car to the rear bumper of your friend's car. (A car length for most American automobiles is 16 feet.) If you have positioned your car within 8 feet, plus or minus, of any of these distances, you are doing unusually well. If you do not already know how much of the road surface is obscured by the hood of your car as you sit in the driver's seat, your guess for two car lengths will probably provide a special surprise. Most people think that they are right on top of the car in front of them when, as a matter of fact, they are two or more car lengths behind.

If you wish to improve your ability to estimate following distances, you may find it helpful to use the distances between the joints of the cement highway or between telephone poles. Cement block dimensions vary from one stretch of highway to another, but are usually about three car lengths apart. This means that if the rear bumper of the car ahead is passing over a joint at the same moment that the front bumper of your car is passing over the next joint, the two cars are then about three car lengths apart. Telephone poles are usually 100 feet apart, or about six car lengths.

It is surprising how quickly you can improve your estimation of distance if you check your distance by these readily available units of measurement. Try making a game of it with those riding with you. Ask them to guess various following distances while in motion, then check their accuracy without telling them how you do it. Repeat the test every five minutes, or every half hour, and keep track of their improvement. This can help, incidentally, to counteract the tedium of a long trip.

Looking for Answers

Common sense is apparently not enough to prevent all the accidents which to some extent involve following distance. The Bureau of Public Roads of the Department of Commerce is taking a step towards a solution, by setting up a program of research to uncover some of the preliminary facts needed before new solutions can be found. And since the problem is partly a matter of driver attitudes, as well as driver ability to estimate distances, the bureau has appropriately begun by employing a firm of psychologists — the Applied Psychology Corp. of Arlington, Va.—to start the investigation. *(The authors are members of this firm.)*

They are at present engaged in measuring the distances that ordinary drivers maintain behind other cars when there is no interference from other traffic. People are being asked to drive at their usual distances, at distances which they consider to represent maximum safety, and at distances they are willing to accept under emergency rush conditions. Experiments are being carried out at both 30 and 50 m.p.h. When the results are in, new knowledge will have been gained about the effect of mental set, as influenced by instructions, and speed on following distance and on the relationship between various driver characteristics and the distances they prefer to maintain.

Improving Judgment

Another experiment under way at present involves the problem of estimating length of following distance. Drivers are being asked to estimate following distance while driving and are then given special training in the use of two simple aids to distance judgment. One of these is based on a visual fusion phenomenon like that used by military drivers in convoy driving. (In the military situation, pairs of lights are placed together on the back of each vehicle, and the following driver knows that he is at the right distance when he can see just two lights and no more.) The second aid will also be familiar to many military drivers—the counting of seconds. Drivers are being trained to count seconds correctly, then to use this method of estimating time to determine the number of seconds between the time when the lead car passes a reference point and the following car passes the same point.

When these experiments are finished, preliminary information will be available for answering the questions, "What is the effect of mental set and speed on following distance?" and "How well do drivers judge following distance, and are there simple techniques which they can use to improve their accuracy?"

Traffic Safety Index

The index to volume 58, Nos. 1-6, January-June 1961, is now available from the National Safety Council Library, 425 N. Michigan Ave., Chicago, Ill.

Representative Roberts to Speak At Opening Congress Session

CONGRESSMAN Kenneth A. Roberts will present a picture of the federal government's interest in highway safety when he speaks at the opening traffic session of the 49th National Safety Congress and Exposition in Chicago, Oct. 16 at the Pick-Congress Hotel.

Kenneth A. Roberts

Roberts is chairman of the special subcommittee on traffic, House Committee on Interstate and Foreign Commerce.

The initial session is designed to provide an over-all view of the vast highway traffic safety problem, and will include a discussion of the Interstate Highway System and the problem of surface streets. Following the presentations time will be allowed for comments from the audience.

Prior to the first session, the Third Annual Traffic Kickoff Luncheon will be held to give delegates and friends an opportunity to get acquainted before the sessions begin.

Franklin M. Kreml, director of the Transportation Center of Northwestern University, will be the featured speaker.

Presiding over the luncheon will be Richard O. Bennett, secretary-treasurer of the Insurance Institute for Highway Safety and chairman of NSC's Traffic Conference.

On Tuesday morning, Oct. 17, and Wednesday morning, Oct. 18, the police groups are to meet in special sessions. The first session will be devoted to discussion of effects of enforcement on quantity and severity of traffic accidents. The second session is slated to take the form of a debate on the question, "Should all motor vehicle accidents be investigated?"

A special session on seat belt promotion is also planned for Tuesday morning. With the increased national interest in seat belts, this program may aid delegates in their preparation for projects in their own communities.

The traffic engineers will meet in special session on Wednesday morning. They will discuss traffic safety engineering in small cities. The courts group will meet in special sessions both Tuesday and Wednesday mornings.

The general session scheduled for Tuesday afternoon is concerned with post-license control. Three panel discussions will be held covering areas of driver license suspension, the point system, and the problem of the aging driver. This session should generate some lively discussion from the various interests involved.

Wednesday afternoon is reserved for another general session, this one devoted to the subject of chemical tests for intoxication. The session will look at the use of chemical tests and delve into what's in store for them in the future. Four areas are to be covered: law and legislation, enforcement, new developments in devices and use in driver research.

Conference committees are meeting on Thursday of Congress Week. These include: the Committee on Uniform Traffic Accident Statistics, the Committee on Alcohol and Drugs and the Committee on Winter Driving Hazards.

Additionally, there is a joint program of the Home and Traffic Conferences scheduled for Thursday morning at the Conrad Hilton Hotel. Two very important subjects of interest to traffic people are discussions of driving simulation and periodic physical examination for drivers.

Of general interest to traffic delegates is the Congress banquet to be held Tuesday evening at the Conrad Hilton Hotel. The annual Congress party will be held on Thursday evening, also at the Hilton.

Early Morning Sessions

EACH YEAR October visitors to Chicago's Conrad Hilton hotel witness an amazing sight. They see delegates to a convention literally pouring into the hotel's grand ballroom at a dawn-cracking 8 a.m.

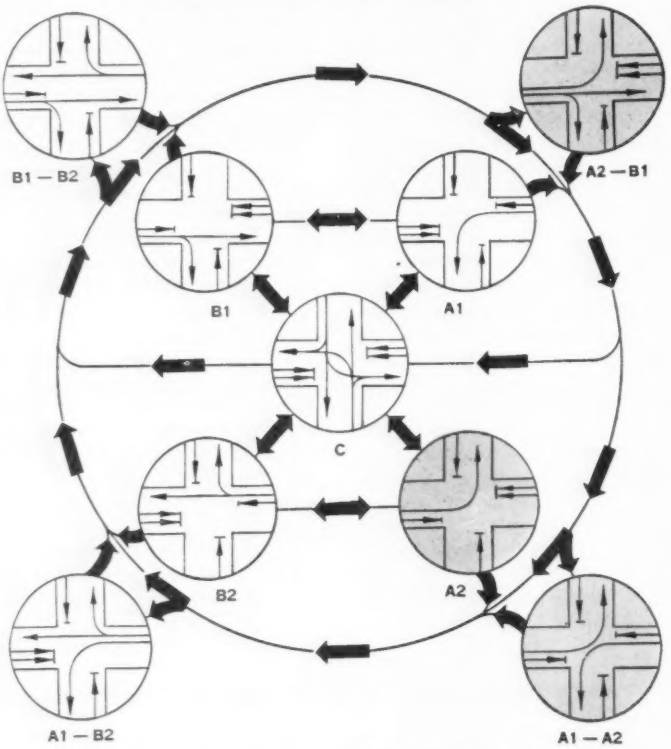
The hundreds of early-birds who forego breakfast to overflow the Hilton ballroom include many traffic delegates.

And judging from the program planned for the 1961 Congress, there will be the usual standing-room-only signs out. This year's speaker will be Bill Gove, nationally known for his many talks before trade associations, chambers of commerce, sales meetings, and banquets. Gove will have as his over-all theme, "Time—Its New Dimensions."

"Most of us," says Gove, "spend a great deal of time and thought studying how to invest our money profitably, but very little time preparing ourselves to invest our *time*. Yet all around us are those who are accomplishing two, three, a dozen times as much as we do in the same allotted 24 hours a day." Gove will show how time has more than one dimension—more than clock and calendar significance. He will suggest ways a person can change his image of what time really is and look to its dimensions for spectacular improvement in the area of time management.

NEW ELECTRONIC DEVICE SPEEDS TRAFFIC MOVEMENT

How Controller Works



The new electronic controller provides nine possible traffic movements. Starting with any one movement, the connecting lines and the arrows indicate the variety which can follow. The response of the controller and the order in which movements come up is dependent only on traffic demand.

Elimination of all parent phase restrictions makes it possible for right-of-way to be transferred directly from either or both left turns to the cross street. Right-of-way can be transferred directly from the artery straight through to either or both left turns. Also, the two left turns may start simultaneously or separately, depending upon traffic demand.

If movement A2 is in effect and a call is received on A1, the controller immediately changes to condition A1-A2. If the demand on left turn A1 then ends, and there is a call on straight through B1, the controller moves directly into condition A2-B1. The succeeding positions would be dependent upon traffic demand. In the absence of traffic, the right-of-way remains on the approach having the last vehicle call.

A NEW "magic brain" electronic control device which allows automobile traffic to move with greater speed and safety at heavily traveled intersections has been introduced by the Crouse-Hinds Co., Syracuse, N. Y., one of the major U. S. suppliers of traffic signals and controllers.

According to Robert J. Sloan, Crouse-Hinds president, the new electronic traffic controller offers greater flexibility of operation and a combination of other advantages. Sloan said the new control device (ETC-909), upon which patents are pending, allows the maximum flow of traffic while preventing frustrating and dangerous jams that occur when drivers try to make left turns against oncoming traffic or when cars pile up at intersections while waiting for traffic signals to go through pre-arranged time cycles. It responds to the actual movements of traffic, through actuating sensors embedded in the roadway or suspended overhead.

The company estimates that there are several thousand intersections in the United States at the present time which can benefit from the versatility of traffic control available in the new device.

Among the advantages claimed for it, three features will be of special importance in keeping heavy traffic moving safely through busy intersections:

1. The new unit permits a flexibility and efficiency in handling left turn traffic. With it, left turns can be made from either direction independently, or in both directions simultaneously, without interrupting or delaying the flow of non-conflicting traffic. This takes the present danger and delay out of making left turns and prevents cars from jamming up at intersections while waiting for a chance to turn left against oncoming traffic.

2. The new unit eliminates the delays caused when cars are forced to wait for traffic signals to go through pre-set time cycles. It meters the flow of traffic electronically and instantly

puts the green light where it is needed. The new controller can switch the green "go" signals from any lane or combination of non-conflicting lanes to any other directly. There is no "green light" time wasted on lanes where there is no traffic.

3. It keeps intersections clear by allowing cars to move in as many as four non-conflicting directions at one time, swiftly and smoothly.

The new controller may be used with existing traffic signals as well as in completely new installations. Its construction, using simplified plug-in connections, allows the wiring and timing mechanisms to be removed easily for servicing.

Based upon new electronic circuitry invented by the company's design engineers, the device will move traffic in any combination of non-conflicting directions, up to four, simultaneously. Typical examples include:

Simultaneous left turns from opposite directions.

Simultaneous left turn, right turn and straight through from one direction.

Simultaneous straight through in two directions.

Simultaneous straight through and right turn from two directions.

Simultaneous left turns and right turns from four directions.

The device is essentially a five-phase full-actuated controller which has a prime application at a two-street intersection where one of the streets has left turn lanes on each of its approaches. The controller provides maximum efficiency of traffic movement through complete flexibility of right-of-way assignment. Minor movement timers for this application have been completely eliminated, and there is no longer any limitation imposed by parent phases.

Most of the components are jack-mounted for quick replacement. Each of the two units has its separate plug-in cable form attached to a swinging cable guide.

Each phase has provision for separate adjustment of the initial (5-30 seconds), the extension (2-14 seconds), the maximum (10-90 seconds), and the yellow clearance (2-8 seconds). One detector actuation by a vehicle results in a timing of the initial and one extension interval. Successive detector actuations during the extension portion each cancels the unexpired time of the preceding actuation and adds another unit extension.

The maximum timing on any phase starts only when a call is registered on a conflicting phase. Each phase has the usual memory feature so that if the maximum times out, right of way is automatically returned to that phase after all other calls have been answered.

First production models of the new electronic controller, which will sell for about $3,000 each, were shipped to fill orders about August 1.

The company reports that the new controller has been well received by state, county and municipal traffic engineers who have had preview demonstrations.

Said Walter Klapproth, traffic engineer for the city of Austin, Tex., "One of the many difficult problems that face traffic engineers today is the signalization of intersections involving a multi-lane major artery and a cross street. The new Crouse-Hinds ETC-909 traffic controller impresses me with its ability to handle this problem.

"With the present volumes of traffic being encountered on our streets today and the expected increased volumes of tomorrow, flexibility of movement and the elimination of unnecessary delays are a 'must' in controller design. Because it offers these features, plus the advantage of easy maintenance, the new Crouse-Hinds ETC-909 will be welcomed by traffic engineers."

John J. Hall Retires from Esso

John J. Hall, whose pioneering programs in traffic safety have been adopted throughout North America, and in other parts of the world, has retired as director of the Esso Safety Foundation — a position he has held since 1954.

John J. Hall

Hall's long career in highway safety covers 3½ decades. It also covers three industries—automotive, insurance and oil—with a strong and mutual interest in reducing the street and highway death and accident toll.

His promotion of the first statewide vehicle check—which was held in New York — earned him the title "father of motor vehicle inspection" in the United States. Hall also developed and promoted the country's first statewide program of high-school driver education, and helped establish the American Association of Motor Vehicle Administrators.

Since joining the Esso Safety Foundation, he has directed programs which — through fellowships, scholarships and grants—have provided training for more than 1,300 high-school and college teachers of driver education, 70 traffic managers and engineers, and more than 1,200 police officials, prosecutors, magistrates and judges.

He is at present a member of the Advisory Council of the President's Committee for Traffic Safety, a director of the National Safety Council, a member of the Laws Committee of the National Highway Users Conference, a director of the Greater New York Safety Council and the New York State Citizens Council on Traffic Safety, and a member of the Advisory Committee of the Center for Safety Education at New York University.

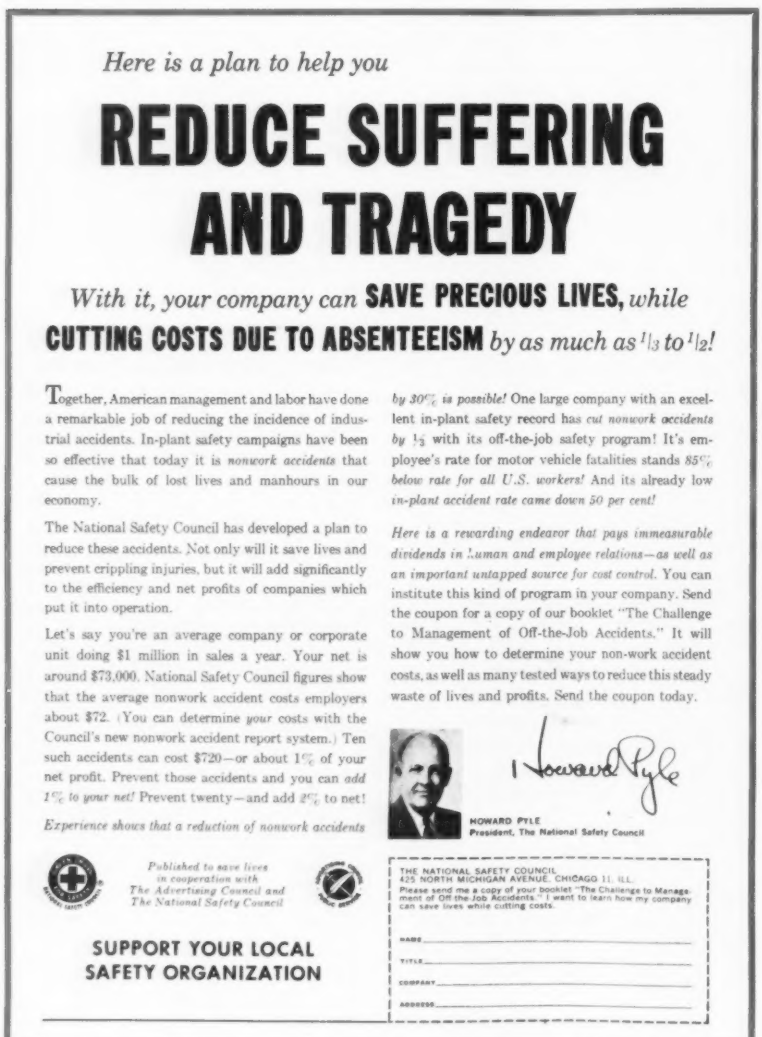
As TRAFFIC SAFETY goes to press word has been received that Mrs. Hall died on July 26. The National Safety Council extends deepest sympathy.

Advertising Council

GIVES OFF-JOB SAFETY A LIFT

ANYONE who rides America's mass transportation or watches television is familiar with the sword and the quill symbol of The Advertising Council.

Through the programs of the Ad Council, Americans have learned why they should support causes such as the Red Cross, Radio Free Europe, forest fire prevention and better schools. One of the most successful programs of the council has been its Stop Accidents Campaign sponsored by the National Safety Council.

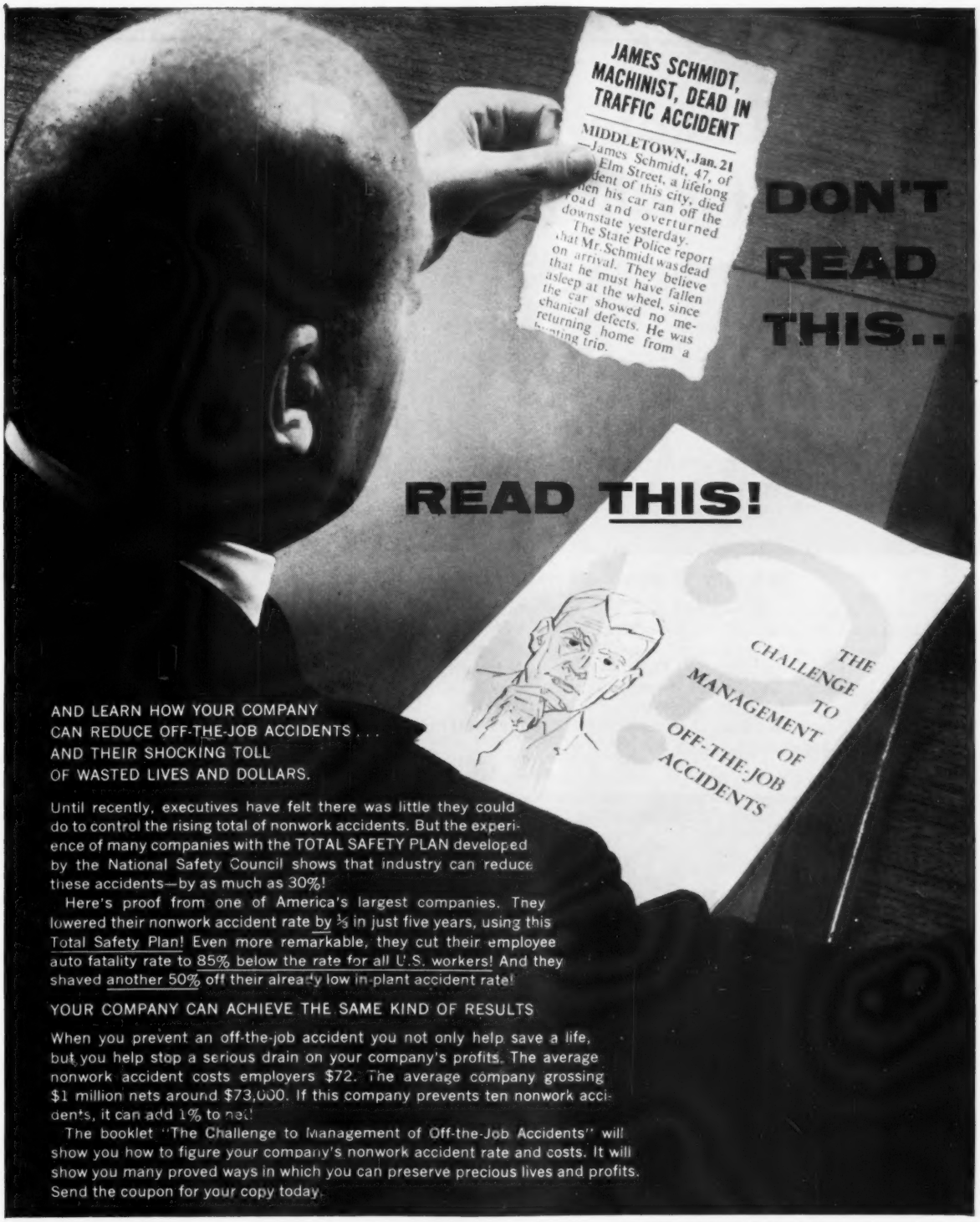

Here is a plan to help you
REDUCE SUFFERING AND TRAGEDY
With it, your company can SAVE PRECIOUS LIVES, while CUTTING COSTS DUE TO ABSENTEEISM by as much as 1/3 to 1/2!
Together, American management and labor have done a remarkable job of reducing the incidence of industrial accidents. In-plant safety campaigns have been so effective that today it is nonwork accidents that cause the bulk of lost lives and manhours in our economy.
The National Safety Council has developed a plan to reduce these accidents. Not only will it save lives and prevent crippling injuries, but it will add significantly to the efficiency and net profits of companies which put it into operation.
Let's say you're an average company or corporate unit doing $1 million in sales a year. Your net is around $73,000. National Safety Council figures show that the average nonwork accident costs employers about $72. (You can determine your costs with the Council's new nonwork accident report system.) Ten such accidents can cost $720—or about 1% of your net profit. Prevent those accidents and you can add 1% to your net! Prevent twenty—and add 2% to net!
Experience shows that a reduction of nonwork accidents by 30% is possible! One large company with an excellent in-plant safety record has cut nonwork accidents by 1/3 with its off-the-job safety program! It's employee's rate for motor vehicle fatalities stands 85% below rate for all U.S. workers! And its already low in-plant accident rate came down 50 per cent!
Here is a rewarding endeavor that pays immeasurable dividends in human and employee relations—as well as an important untapped source for cost control. You can institute this kind of program in your company. Send the coupon for a copy of our booklet "The Challenge to Management of Off-the-Job Accidents." It will show you how to determine your non-work accident costs, as well as many tested ways to reduce this steady waste of lives and profits. Send the coupon today.
HOWARD PYLE
President, The National Safety Council
Published to save lives in cooperation with The Advertising Council and The National Safety Council
SUPPORT YOUR LOCAL SAFETY ORGANIZATION
THE NATIONAL SAFETY COUNCIL
425 NORTH MICHIGAN AVENUE, CHICAGO 11, ILL.
Please send me a copy of your booklet "The Challenge to Management of Off-the-Job Accidents." I want to learn how my company can save lives while cutting costs.
NAME
TITLE
COMPANY
ADDRESS

As might be expected, most of the Ad Council's safety programs have been directed to the general public and consequently the Stop Accidents campaign has hit hard at traffic accidents. Recently, however, the Ad Council has undertaken a program directed to industrial management. Through its Business Paper Advisory Committee, the Ad Council is supporting a special public service advertising campaign designed to show management that it is to their interest to help reduce the number of off-the-job accidents occurring to employes and their families.

In a letter addressed to publishers of business magazines and newspapers, Nelson Bond, chairman of the Business Paper Advisory Committee, states, "Off-the-job accidents in the home alone caused 5,800 deaths and 900,000 injuries in a recent year. Traffic and public accidents cause many times these tragic figures and the economic loss alone to the nation is tremendous. Companies which have carried on active off-the-job safety programs have a considerably lower rate of lost time than those which do not have these programs."

The letter offers the business press free electrotypes of the two ads shown on this and on the facing page. Each ad offers a 16-page booklet, *The Challenge to Management of Off-the-Job Accidents.*

The 16-page booklet tells management why non-work accidents are a managerial concern. Figures are provided on cost of such accidents as well as their effect on production. The booklet also includes information on how to set up an off-job program and keep records on non-work accidents. The booklet concludes with a number of examples of successful company programs.


JAMES SCHMIDT, MACHINIST, DEAD IN TRAFFIC ACCIDENT
MIDDLETOWN, Jan. 21 —James Schmidt, 47, of Elm Street, a lifelong dent of this city, died hen his car ran off the oad and overturned downstate yesterday.
The State Police report hat Mr. Schmidt was dead on arrival. They believe that he must have fallen asleep at the wheel, since the car showed no mechanical defects. He was returning home from a
DON'T READ THIS...
READ THIS!
THE CHALLENGE TO MANAGEMENT OF OFF-THE-JOB ACCIDENTS

AND LEARN HOW YOUR COMPANY
CAN REDUCE OFF-THE-JOB ACCIDENTS . . .
AND THEIR SHOCKING TOLL
OF WASTED LIVES AND DOLLARS.

Until recently, executives have felt there was little they could do to control the rising total of nonwork accidents. But the experience of many companies with the TOTAL SAFETY PLAN developed by the National Safety Council shows that industry can reduce these accidents—by as much as 30%!

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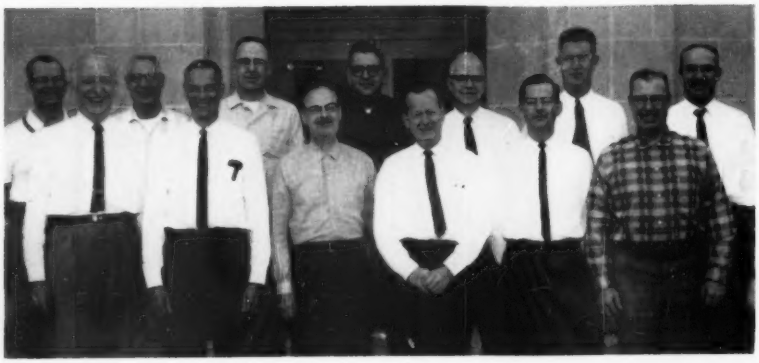
State Representatives Bone Up At Management Course



University of Wyoming Group

Front row (L to R)—Dr. Walter Cutter, New York University; Maxwell Halsey, traffic consultant; Gerald Shipman, Michigan State Safety Commission; F. W. Shadwell, Governor's Coordinating Committee, Missouri; Edward Warmoth, Department of Motor Vehicles, Oregon; Lt. Neil Boyd, Wyoming State Patrol. Second row—Robert McCall, Law Enforcement Department, Idaho; Ernest Bourne, Utah Safety Council; Douglas Hardesty, Montana State Patrol; Marvin Powell, Washington State Safety Council; Paul Hill, National Safety Council; Paul Blaisdell, Insurance Information Institute; Floyd J. Upham, North Dakota public safety director.

Carnegie Institute of Technology Group

Front row (L to R)—Maxwell Halsey; Anthony Ellison, Department of Motor Vehicles, Washington, D. C.; Maj. Parker Hennessey, Maine State Police; James Barrett, Bureau of Motor Vehicles, New York State; Robert Campbell, coordinator of traffic Safety, Illinois. Second row—Walter Cutter; Don Rounds, state safety director, South Dakota; Capt. Robert King, Virginia State Police; Austin O'Brien, Bureau of Motor Vehicles, New York State; Ramiro Marquez, Bureau of Traffic Safety, Puerto Rico. Top row—Ray Wragg, department of Public Safety, Kentucky; Paul Blaisdell; Maj. Charles Speed, North Carolina Highway Patrol; Dorothea S. Healy, Maryland Traffic Safety Commission; James Bassett, Bureau of Motor Vehicles, Kentucky; Lt. William Juett, Jr., Department of Public Safety, Kentucky, and Paul Hill.

NINETEEN state representatives completed Course #3 in State Traffic Safety Management, entitled Resolving State Problems and Developing a Course of Action. One class was held at the University of Wyoming, Laramie, May 22-26. The second class was held at Carnegie Institute of Technology, Pittsburgh, Pa., June 5-9.

This third course is part of a continuing program developed by the Center for Safety Education, Division of General Education, New York University, to aid states in the development of a unified program of motor vehicle safety, thus assuring better use of present resources, and to improve the management of the total state program.

Dr. Walter A. Cutter, director of the Center for Safety Education, is coordinator of the program. Other members of the staff are: Paul H. Blaisdell, director of special activities of the Insurance Information Institute; Maxwell N. Halsey, traffic consultant, and Paul F. Hill, assistant general manager of the National Safety Council.

Those who have participated in the program have praised it highly. Here are a few excerpts from letters received by the staff.

". . . I feel this series represents a milestone for traffic safety, chartering the way to a systematic approach to defining and solving the problems which confront us in this complex business."

"I can think of no other educational program that has given me more intensive, practical material and ideas than the Traffic Safety Management courses."

"I am convinced that until the management techniques and practices, as advocated and taught by your staff, are applied from a state level in each of our states, there will be continued frustration and lack of uniformity and progress, therefore, I urge you to continue this excellent course for new employes."

NEWS FROM CAPITOL HILL

CONGRESS passed, and the President signed into law as Public Law 87-61, the Federal-Aid Highway Act of 1961, to provide for the completion of the interstate highway system as originally authorized by the highway act of 1956, through authorizing a firm program of annual appropriations for apportionment to the states.

The Senate committee report told the Congress it had been advised the interstate system "will save at least 4,000 lives annually, reduce personal injuries by 150,000, and cut economic losses by $2.1 billion annually."

The bill has two specific safety-related features: It extends for two years, through June 1963, the present billboard and outdoor advertising control provisions whereby the federal road grant to a state is increased by one-half of 1 per cent for states agreeing to regulate billboard advertising within 660 ft. of certain sections of the interstate system, this provision was added on the floor, contrary to committee action. A second safety feature of the bill authorizes states or their political subdivisions to use, or permit use of, airspace above and below the established grade line for any purpose not impairing the full use and safety of the highway, pursuant to rules and regulations adopted by the secretary of commerce.

The Congress also approved and the President signed into law as PL87-70, the housing bill, which includes three authorizations: $25 million of urban renewal funds for federal grants to local agencies to cover two-thirds of the cost of pilot mass transportation demonstration projects; $55 million for mass transportation studies and surveys by states and localities, as part of the urban planning program, with advance blanket approval given to interstate compacts for joint planning projects by more than one state; and $50 million for low-interest loans to metropolitan agencies for construction and equipment of mass transportation systems, this authority to contract being limited to Dec. 31, 1962.

In addition to the administration-sponsored mass transportation provisions of the housing bill, the President sent to the Congress a proposed bill "to provide for increased authority for federal assistance to urban transportation planning," to include surveys, studies, planning and experimental demonstrations, as an emergency measure pending future congressional consideration of other legislation.

Hearings on this bill, H.R. 7787, revealed that the provisions in the housing bill were consistent with plans intended for the long-range program. H.R. 7787 would provide federal aid to states and local governments in planning new or improved transportation facilities and services as a part of comprehensive planning for metropolitan and other urban areas.

In testifying on this bill, the housing and home finance administrator, who would administer it, said "the administration strongly recommends that any loans by the federal government for urban transportation be conditioned upon the existence, or the active preparation, of an area-wide over-all plan."

The Senate passed S. 1440, providing technical amendments to the driver register act to enable additional states to participate in the program. The Secretary of Commerce announced the official inauguration of the National Driver Register Service on July 1st, 1961, as a purely voluntary, cooperative state-federal enterprise. *(See page 11.)*

On its opening day, the register had the official cooperation of 45 states and territories, with others expected to agree to participate.

Plans are in the offing for the federal government to test the feasibility of automatic highway operations, with steering, acceleration, and braking to be electronically controlled along a 100-mile stretch of experimental roadway.

The number of motor-vehicle operators' licenses reached 87.4 million in 1960, according to the federal highway administrator. This was a 3.4 per cent increase over 1959.

There were 1.2 licensed operators per registered motor vehicle in 1960, a statistic which the federal official said "reflects the long-term trend toward one operator per vehicle."

State highway-user taxes collected in 1960 set a new record, $5.3 billion, the same federal official announced; the 1960 figure was a 4 per cent increase over 1959. The states reported that 64.8 billion gallons of motor fuel were consumed in 1960.

Commercial Transportation

The AEC is paying special attention to the transportation of radioactive materials. It said that "safety in this transportation is largely dependent upon the proper design of shipping containers to assure that external radiation levels are kept within safe limits, and that containers are designed and constructed so that they are not likely to rupture and release their contents."

The AEC is drafting amendments

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This report is an information service. Publication does not imply National Safety Council approval of or opposition to any legislation mentioned.

Washington Briefs

President signs Federal-Aid Highway Act providing for completion of interstate system which "will save at least 4,000 lives annually."

Bill sent to Congress to provide for increased federal assistance to urban transportation planning.

National Driver Register service goes into operation.

Atomic Energy Commission undertakes program to educate carriers on transportation of radioactive materials.

A New Look At Safety Councils

by James M. Basham

IN JUNE, 1957, the board of directors of the National Safety Council adopted a report by its Committee on Financial Support for Local Safety Organizations which urged that to obtain public confidence in a strong system of state and local safety organizations, "Standards of program performance be established, including written standards for policies, programs, leadership and staff, and that regular appraisals be made. Endorsement or non-endorsement by NSC should be based on regular appraisals and program audits."

Accordingly, in October, 1957, the Conference of State and Local Safety Organizations and the NSC board of directors adopted an appraisal program with the following important provisions:

1. The service will be offered to member organizations, both chapters and non-chapters on the same basis, providing they employ full-time staff.

2. All appraisal work will be completed without local or other publicity and with no release of information to persons other than duly authorized representatives of the local organization requesting the appraisal.

3. Work by NSC staff will be limited to gathering objective data, with actual evaluation by an appraisal committee of the national Conference of State and Local Safety Organizations.

4. Appraisal standards will be consistent with *Community Safety Organization, Principles, Policies, Programs,* developed through and approved by the Conference of State and Local Safety Organizations. In the traffic field, these principles, policies, and programs are expanded in the *Conference Workbook of the President's Committee for Traffic Safety* and *Businessmen and Traffic Safety,* published by the Business Advisory Panel of the President's Committee.

More than 100 organizations now have been appraised. Of this number, 14 state and 67 local safety organizations presently are accredited by NSC as meriting public confidence and financial support in the states and metropolitan centers they serve.

Thirty-six of the accredited metropolitan councils had been through three appraisals, as of May, 1961.

James M. Basham is program consultant, field services department, National Safety Council.

Now in its fourth year, the program was recently studied to see where it had gone and where it was going. The 36 councils which had been through the three appraisals were used as the basis for the study. Their progress has surpassed the expectations of the National Safety Council.

The initial appraisal was made in 1958 for 1959 accreditation. The chart on page 23 shows a comparison of the self improvement in the 36 councils from the initial appraisal to the evaluation of the second anniversary reports in May, 1961.

At the time of the 1958 appraisal, 15 of the 36 were seriously deficient in leadership—only one of these was deficient at the time of the 1961 appraisal.

Eight councils had weaknesses in organization structure in 1958—all were satisfactory in 1961.

Seventeen councils were seriously under-financed in 1958—nine remained so in 1961, but almost all had improved.

Nine councils had unsatisfactory relationships with official agencies in 1958—none was rated unsatisfactory in 1961.

Twelve councils were rated as unsatisfactory in the amount of staff and facilities in 1958—four were still deficient in this respect in 1961.

Ten councils were rated unsatisfactory in program in 1958—only one was so rated in 1961.

In summary, among the 36 councils, 72 major deficiencies were found in 1958—in 1961, only 15 such deficiencies were found.

The following is an example which shows the comparison of one council at the time of the initial appraisal in 1958 and at the time of the second anniversary report in 1961.

This council was rated poor in every section of the appraisal in 1958—at least satisfactory in every respect in 1961. Its program in 1961 was rated more than satisfactory.

In the 1961 evaluation, the council's gross income had been raised almost 45 per cent over 1958.

Between the two appraisals, new leadership had been enlisted and the responsibilities of the board of directors defined. Additional needed staff had been employed. The council had

been reorganized completely. New by-laws incorporating appraisal recommendations on organization, finance, and program were adopted.

Thirty-seven major recommendations were offered after the appraisal in 1958. Of these, 24 had been carried out by the time of the 1961 appraisal, and substantial action had been taken on 11 others.

Six essential elements of sound organization for community safety are evaluated in the appraisal of each council. These are—

- Leadership—the active participation of top business and civic leaders with influence in the community and practical experience in getting things done.
- Organization structure — the framework of the council, including its by-laws, board of directors, executive committee and staff.
- Relationships with Officials—effective working relationships with officials and official agencies.
- Staff and Facilities—a competent and adequate staff.
- Program — a program of work based on competent analysis of accident problems and community resources for meeting these problems.
- Finance—sufficient funds to carry out the program.

The Appraisal Committee sits in May and October each year. Half the councils are evaluated at each session. Only councils accredited by NSC may say they are "Chartered by the National Safety Council." They also may use the title "Chapter of the National Safety Council."

The councils which participate in the program serve more than 60 per cent of the population of the U.S.

There are 81 safety councils presently accredited by the National Safety Council. Each is re-evaluated once a year to see if it meets minimum standards and to see if previous recommendations for self improvement are being carried out.

By being accredited through the appraisal program, councils become members of the Conference of State and Local Safety Organizations. Managers of these councils make up the conference membership and formulate conference policy. It is the executive committee, which is chosen from conference membership, which, with the help of the field service department staff, National Safety Council, is responsible for the day-to-day operations of the conference. The members of the appraisal committee are appointed from among the membership of the executive committee. This committee of council managers evaluates the councils. After councils have submitted the necessary data for the appraisal, the NSC staff summarizes and codes the information before it is submitted to the appraisal committee. This insures objectivity by preserving the anonymity of the council undergoing appraisal. (See *What Makes a Safety Council Tick?*—TRAFFIC SAFETY, November, 1959.)

Appraisals are offered at no cost to the local councils, but are made only upon formal request by the council's governing board. The request must include the agreement to appoint a small appraisal committee of the members of the board of directors to work directly with the NSC district director conducting the field phase of the appraisal.

The councils have improved themselves and it is expected they will continue to do so. The attitude of most of the managers of accredited councils is summed up in a recent letter received at National Safety Council headquarters which said in part: "We were very pleased to learn of our accreditation. We have worked toward it for a long time and have tried to do everything to merit it. You can be sure that accreditation will not mean any relaxation on our part on future improvements."

Accredited State and Local Safety Organizations

The following is a list of the safety organizations presently accredited by the National Safety Council.

Metropolitan Safety Organizations

Arizona

Maricopa Safety Council.

California

Fresno County Safety Council; Long Beach Safety Council; Greater Los Angeles Chapter, National Safety Council; Eastbay Chapter, National Safety Council, Oakland; Sacramento Safety Council; San Diego County Traffic Safety Council; San Francisco Chapter, National Safety Council; Santa Clara County Chapter, National Safety Council, San Jose, and San Joaquin County Safety Council, Stockton.

Colorado

Metropolitan Safety Council, Denver.

Connecticut

Greater New Haven Safety Council.

Florida

Jacksonville-Duval County Safety Council; Northwest Florida Safety Council, Pensacola, and Greater Tampa Citizens Safety Council.

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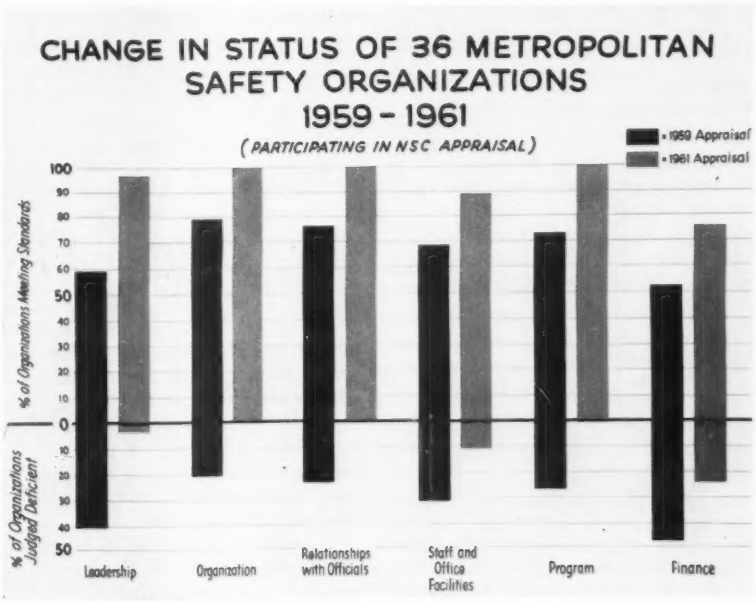


Public Favors Driver In Fatal Crash Cases

IS A JURY likely to crack down on a driver who has been involved in a fatal traffic accident?

According to a recent public opinion poll conducted by the *Minneapolis Tribune*, the answer is, "No!"

The newspaper—in collaboration with Prof. Yale Kamisar of the University of Minnesota law school—recently conducted a statewide survey to determine how Minnesota men and women might react if they were jurors in trials of four drivers involved in fatal highway mishaps.

Here's how Minnesotans "judged" the defendants.

	Driver W (absent-minded)	Driver X (party drinker)
Guilty of criminal negligence	50%	41%
Guilty, under influence of liquor	—	51
Guilty of careless driving	48	5
Not guilty	—	*
Other answers	1	1
No opinion	1	2
	100%	100%

	Driver Y (sleepy motorist)	Driver Z (illegal passer)
Guilty of criminal negligence	54%	71%
Guilty of careless driving	43	27
Not guilty	2	*
Other answers	*	1
No opinion	1	1
	100%	100%

(*—Less than 1 per cent.)

After reviewing the four cases, each person was asked:

"Now, thinking of these four drivers, is there any ONE driver you feel particularly sorry for? Which driver?"

The replies:

	All Adults	Men	Women
Yes, particularly sorry for drivers:			
W	20%	20%	19%
X	13	11	14
Y	15	14	17
Z	2	1	3
More than one, or all of them	2	2	2
No, not for any	48	52	45
	100%	100%	100%

How the juror's sympathy affects his verdict was shown by the judgments on Driver X, the party drinker, given by all adults and by persons who felt "particularly sorry" for him. (The hypothetical Mr. X, after having a number of highballs, crashed into a utility pole, killing his wife.)

	All adults	Particularly sorry for X
Guilty, criminal negligence	41%	25%
Guilty, influence of liquor	51	64
Guilty, careless driving	5	8
Not guilty	*	1
Other answers	1	—
No opinion	2	2
	100%	100%

(*—Less than 1 per cent.)

In similar fashion, considerably lighter verdicts are meted out to Drivers W and Y by people who are particularly sorry for them. Driver Z failed to evoke enough sympathy to make much difference in his case.

People with college training tend to be more sympathetic toward the drivers. Sixty-five per cent of the college group name drivers they are "particularly sorry for," compared with 52 per cent of the entire sample who do so.

Few Serious Charges

The day the poll results were published, Don Morrison, *Minneapolis Tribune* staff writer, interviewed Professor Kamisar on the subject of jury trials in serious traffic accident cases.

Kamisar, who is conducting research to determine how Minnesota county attorneys exercise the "prosecutor's discretion" in serious traffic offenses, has surveyed 13 counties—representing half the state's population. He has studied the cases of surviving drivers involved in fatal accidents against whom there was enough evidence to make them possible defendants on a charge of criminal negligence.

He found that during 1958 and 1959 only 7 per cent of potential defendants were tried on this charge. He says similar figures exist for Michigan and Massachusetts.

Kamisar was inclined to be critical of attorneys at the beginning of his study, but is now convinced that they are merely acknowledging the reality of the situation.

He said that the Minnesota poll illustrates the theory that juries will rarely convict in traffic fatalities when the charge and penalty are severe.

"In the case of Mr. X who killed his wife by driving while drunk, you will notice that less than half (41 per cent) of all adults say they would bring in a verdict of criminal negligence," he said. "Fifty-one per cent favor the lesser verdict of driving under the influence and 5 per cent vote for careless driving."

He pointed out that on a jury of 12 persons such a division of opinion would almost certainly result in an acquittal, a compromise on a lesser charge or a deadlock with no verdict.

Kamisar gave a number of reasons why juries act as they do in these cases.

One of the reasons is that most jurors are drivers, and many of them are likely to feel that, with a little bad luck, they could be sitting in the defendant's chair themselves.

Also, the traffic offender is not a professional criminal, but often a respected member of the community. Because the jury can identify with him, it is difficult for them to think of him as guilty of more than bad judgment or carelessness.

"Another important factor is sympathy for a defendant who has killed someone in an accident," Kamisar said. "In the poll, 53 per cent of the women favored lesser punishment even for Mr. X who killed his wife.

"A jury is likely to feel a man has suffered enough punishment by having a death on his conscience — and a prosecutor might ask himself what purpose would be served by putting him through the further ordeal of a trial."

In 30 Minnesota cases in which a member of a driver's family was killed in an apparently negligent accident, only one case was prosecuted, Kamisar said.

"To some extent a jury tries the whole man and his whole life," he said. "It would seem a jury finds it almost impossible to filter out extra-legal factors, such as the man's prior reputation, his appearance — and perhaps his children sobbing in the back of the courtroom."

He said he thought it proper for a

prosecutor to take into account what a jury might do in a given case.

"Prosecutors have told me, and the poll figures document their feeling, that pressing charges when they know they can't get a conviction is of little service to society. Frequent acquittals are as damaging to respect for law as lax enforcement."

Kamisar said he saw no indictment of the jury system in this situation.

He cited a University of Chicago study in which judges were polled on criminal trials over which they had presided. In 80 per cent of the cases the judges agreed with the jury verdicts returned.

Of the 20 per cent area of disagreement, the judges would have convicted nine-tenths of the defendants whom the juries acquitted.

"I would suggest that a jury favors a defendant by taking into account extra-legal factors which a judge does not," said Kamisar.

He believes any indictment of our legal system as applied to gross traffic offenses would have to be leveled against the values of our whole society.

"We almost seem to value a man's right to drive a car higher than we value human life," he said. "We just don't seem to consider killing someone with a car a very serious crime."

"No Passing" Signs On Left Side

The Michigan State Highway Department is conducting an experiment in Northern Michigan to test the effectiveness of "No Passing" signs placed on the left side of the road.

Site of the study is US-27 in the Vanderbilt-Gaylord area in Otsego county, where a number of "No Passing" signs have been installed on the left side of the highway.

"No Passing" signs are presently posted on the right side of all state highways at the beginning of each "No Passing" zone. The zones also are marked by a yellow strip of paint that runs the entire length of the zone in the center of the highway.

Highway engineers believe it may be easier for motorists to spot signs on the left side of the road because a driver normally keeps his eyes trained in that direction.

COMING EVENTS

Sept. 11-15, Knoxville, Tenn.

Fifteenth Southern Regional Traffic Court Conference. University of Tennessee College of Law. Contact Director, Traffic Court Program, American Bar Association, 1155 East 60th St., Chicago 37, Ill.

Sept. 13-14, Westbury, L. I.

Nassau County Medical Society Safety Seminar. Roosevelt Raceway. Dr. Mark Kenyon, 1200 Stewart Ave., Garden City, L. I.

Sept. 14-16, Minneapolis, Minn.

Fifth Stapp Conference. University of Minnesota. Contact Merrill K. Cragun, associate director, Fifth Stapp Conference, Center for Continuation Study, University of Minnesota, Minneapolis 14.

Set. 21-22, Baltimore, Md.

Governor's Annual Safety-Health Conference and Exhibit. Hotel Emerson. Contact Joseph A. Haller, executive chairman, Safety Conference, State of Maryland, 301 W. Preston St., Baltimore 1, Md.

Sept. 25-26, Manhattan, Kan.

Twelfth Governor's Industrial Safety Conference for Kansas. Kansas State University. Harold L. Smity, commissioner of labor, Kansas Department of Labor, 401 Topeka Blvd., Topeka, Kan.

Sept. 25-28, New York City

1961 Industrial Building Exposition. New York Coliseum. Ed Grief, Banner and Grief, 369 Lexington Ave., New York 17.

Sept. 26-27, Harrisburg, Pa.

Annual Occupational Safety Conference. Pennsylvania Department of Labor and Industry. Frank K. Boal, deputy secretary, Department of Labor and Industry, Harrisburg, Pa.

Oct. 10-12, Houston, Tex.

Twelfth Annual Conference on Standards (Rice Hotel). H. C. Ball, Humble Oil and Refining Co., Baytown, Tex.

Oct. 16-20, Chicago

Forty-ninth National Safety Congress and Exposition (Conrad-Hilton Hotel). R. L. Forney, secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

Oct. 26-27, Pittsburgh, Pa.

Twenty-fifth Annual Meeting, Industrial Hygiene Foundation (Mellon Institute). Dr. H. H. Schrenk, managing director, Industrial Hygiene Foundation, 4400 Fifth Ave., Pittsburgh 13.

Nov. 8-9, Columbia, S. C.

Twenty-fourth Annual South Carolina Accident Prevention Conference. Wade Hampton Hotel. Contact Fred Derrick, South Carolina Industrial Commission, 1015 Main St., Columbia, S. C.

Nov. 13-17, Detroit, Mich.

Eighty-ninth Annual Meeting of the American Public Health Association, Cobo Hall. Contact Joseph G. Molner, M.D., health commissioner, Detroit, Mich.

Nominations Open For Hoffman Award

Nominations are now open for the 1961 Paul Gray Hoffman Award for distinguished professional services in highway safety.

Active professionals in traffic safety — educators, engineers, enforcement officials, motor vehicle administrators, organization staff executives, researchers who make their careers in highway safety—are eligible. Candidates must be currently employed in and draw their principal means of livelihood from any of the activities embraced by the Action Program of the President's Highway Safety Conference.

Award nominations may be made by an individual or by a local, state or national group. Each nomination must be accompanied by a brief statement (1,000 words or less) setting forth the candidate's traffic safety accomplishments. The record may cover any period of time, *recognition not being limited to annual performance.* Supporting evidence in the form of testimonials, clippings, reports, photos, etc., may be included. No special entry blanks are required.

All nominations should be mailed to the Automotive Safety Foundation, 200 Ring Building, Washington 6, D. C. The foundation is administrator of the Paul Gray Hoffman Award. Closing date for entries is September 15, 1961.

THE LEGISLATIVE HOPPER

A roundup of significant traffic safety legislation

Chemical Tests—Drunk Driving—Narcotic Drugs

New Bills Introduced

Florida—H. 2734—authorizes arrest without warrant in drunk-driving cases.

North Carolina—H. 1178—provides for use of chemical tests in drunk-driving cases involving criminal actions.

Action and Additional Information

California—S. 1278—requires courts to obtain record of prior convictions before passing sentence in drunk-driving cases—passed Senate. H. 2497—provides for issuance of special limited driver license for driving related to employment only, on first conviction of drunk driving. H. 2592—provides for chemical tests in drunk-driving cases—both passed House. S. 605—relates to operating vehicle while under influence of dangerous drug other than narcotic drug—passed both Houses. H. 2353—prohibits possession or consumption of alcoholic beverages in a vehicle—amended, passed House; passed Senate.

Connecticut—H. 2187—requires courts to obtain record of prior convictions before passing sentence in drunk-driving cases—passed Senate.

North Carolina—S. 97—provides for scientific tests for intoxication in criminal cases involving drunk-driving—amended, passed Senate.

Pennsylvania—H. 519—permits use of chemical tests in drunk-driving cases—passed House.

Executive Action

Florida—H. 2217—amends chauffeur license provisions to provide that plea of *nolo contendere* shall constitute conviction requiring driver license cancellation in cases involving driving under influence of narcotics—law without approval.

Oregon—H. 1757—removes requirement for written consent to chemical tests for intoxication—approved.

Driver Education and Improvement Schools

Action and Additional Information

California—H. 2580—permits courts to require person convicted of traffic misdemeanor to attend three-hour traffic violator school—passed both Houses.

Pennsylvania—S. 572—makes continuing appropriation from motor license fund for support of driver education—passed Senate.

Vermont—H. 378—provides a driver retraining program for operators convicted of driving violations—passed House.

Executive Action

Florida—H. 733—provides appropriation for expense of driver education program in secondary schools—approved.

Oregon—H. 1397—increases per-pupil amount of state aid for driver training programs—approved.

Driver Licensing

Executive Action

Maine—S. 387—requires drivers over age 74 to take examinations—approved.

Ohio—H. 552—amends law on re-examination of drivers, allows registrar to require proof of license examination or physical examination to determine fitness of driver—approved.

Juvenile Drivers

Action and Additional Information

North Carolina—H. 989—permits issuance of probationary driver license for persons between ages 16 and 18—tabled, House.

Pennsylvania—S. 99—regulates issuance of driver licenses to persons between 16 and 18; restricts their driving privileges—amended, passed Senate; amended, passed House.

Rhode Island—S. 278—prohibits operation of vehicle by minor if vehicle contains intoxicating beverages—passed Senate. H. 1733—requires 30 hours of classroom instruction in driver training before person under 18 may receive driver license—passed House.

Executive Action

Connecticut—H. 2662—restricts driving to daylight hours for persons between 16 and 18—approved.

Florida—H. 734—prohibits issuance of driver license to person under age 18 unless he has completed driver training course—law without approval.

Miscellaneous

Action and Additional Information

California—H. 1619—prohibits driving of vehicle with obstructed windshields—passed both Houses.

Pennsylvania—S. 75—requires dimming of headlights when overtaking another vehicle—amended, passed Senate; amended, passed House.

Executive Action

Florida—S. 430—prohibits erection of unsafe or unsightly outdoor advertising devices—law without approval. H. 221—requires vehicle drivers to stop close to right-hand curb and pedestrians to yield right of way upon approach of emergency vehicles—law without approval.

Ohio—H. 67—requires riders of animals to proceed along left of highways—approved.

Motor Vehicle Inspection

Action and Additional Information

Illinois—H. 950—requires that vehicle safety glass be laminated and excludes tempered glass—passed House.

Ohio—H. 686—prohibits sale of hydraulic brake fluid not meeting standards fixed by highway safety director—passed House.

Pennsylvania—S. 65—makes sale of regrooved tires without notice thereof a crime—passed both Houses.

Executive Action

Florida—S. 979—prohibits sale of misbranded or adulterated brake fluid—law without approval.

Massachusetts—H. 2760—fixes inspection period for motor vehicles—approved.

New Hampshire—S. 99—regulates sale and use of hydraulic brake fluids—approved.

Radar—Speed Measuring Devices

Action and Additional Information

California—H. 2376—authorizes Highway Patrol to use radar to enforce speed limits—passed House; amended, tabled, Senate.

Illinois—H. 634—prohibits use of electric speed detecting devices unless operated between 200 feet and 1,000 feet beyond sign warning of use thereof—killed, House.

Seat Belts

Action and Additional Information

California—H. 1964—requires new vehicles sold in state after January 1, 1962, to be equipped with anchors for seat belts. H. 2220—requires that driver training vehicles be equipped with seat belts—both passed both Houses.

Executive Action

Connecticut—H. 4392—requires seat belt fasteners and sets minimum seat belt standards—approved.

Michigan—S. 1268—requires installation of seat belt brackets on cars manufactured after January 1, 1962—approved.

North Carolina—S. 375—requires seat belt brackets on new cars and specifies minimum seat belt standards—ratified.

Ohio—H. 679—requires brackets for seat belts on new cars sold after January 1, 1962—approved.

Speed Limits

Action and Additional Information

California—H. 1991—increases speed limit for vehicle towing trailer to 55 m.p.h.—passed both Houses.

Illinois—H. 1417—provides for revocation of driver license and one to five year penitentiary term for drag racing—amended, passed House.

Nebraska—LB 190—repeals 50 m.p.h. limit on trucks and truck-tractors—amended, killed, House. LB 298—sets 50 m.p.h. speed limit for towing mobile homes—withdrawn.

North Carolina—H. 990—permits trial court to impound vehicles used in prearranged racing, speeding and for failure to stop in event of accident—tabled, House. S. 362—establishes minimum and maximum speed limits for interstate sys-

To Page 48

Omaha conference Chautauqua speakers for traffic safety J. O. Grantham, Hal Kent, Mrs. Helen Greene, Col. Kermit Hansen.

Nebraskans Ride Chautauqua Trail

If you still mourn for the good old days when the Chautauqua was an event and there were still cowboys who looked like cowboys—mourn no more. George Nothhelfer, manager of the Omaha Safety Council, reports that the Chautauqua travels again and there are still places where cowboys look like the real thing. He knows because he has just come off a Chautauqua circuit for traffic safety, which took him out into the sand hill country of western Nebraska.

The tour originated when Gov. Frank B. Morrison of Nebraska told the newly formed Nebraska Safety Council that he wanted them to spread the story of traffic safety throughout the state.

Mrs. Helen Greene, a personable young mother of five children and the newly appointed executive secretary of the citizen council, was given the task of conducting four traffic safety conferences in as many weeks.

She called upon some professional safety people to help her and then contacted city officials and safety personnel in Grand Island, North Platte, Lincoln, and Omaha. She also called friends in these communities and asked them to conduct a chain telephone campaign to get people to the meetings. They came in good numbers.

The meetings were designed to give facts about national, state, and local traffic safety problems. Conducting the meetings were: Hal Kent, district director, National Safety Council; Nothhelfer; Col. C. J. Sanders, chief of the Nebraska Safety Patrol; Thomas Ryan, chief of the State Accident Records Bureau; J. O. Grantham, first vice president of the Omaha Safety Council, and Kermit Hansen, president of the Omaha Safety Council.

A panel of local people were called upon to discuss the traffic safety problems in the area. The panel consisted of an educator, a high school student, the county sheriff, the chief of police, the editor of the city newspaper, a representative from the local radio station and another from the local TV station.

Because distances are great in Nebraska, Governor Morrison flew from one meeting to another to tell the citizens of his state about his personal concern for the problems of traffic safety and to ask for assistance in solving them. Kermit Hansen left this challenge in each community, "What are you going to do about it?" Hansen, who is vice president of the United States National Bank of Omaha said, "As a banker it seems to me that the information you have been given is like opening a savings account. You now have something you can put into the account. Are you going to let it lie idle, or are you going to put it to work?"

Indications from city officials, county officials and citizens were that they were going to put it to work—saving lives.

ITE Announces Annual Awards

FIVE states and 31 cities have been honored by the Institute of Traffic Engineers for their traffic engineering work in 1960. The awards, which were based on information reported to the Annual Inventory of Traffic Safety Activities of the National Safety Council, were made by a committee of judges of the institute. Chairman of the committee was Dr. Donald S. Berry, professor of civil engineering at Northwestern University. Other judges were John E. Baerwald, professor of traffic engineering, University of Illinois; Evan E. Olmstead, traffic engineer, Chicago Transit Authority, and member of ITE's board of direction, and Matthew C. Sielski, director of traffic engineering and safety, Chicago Motor Club, and past president of the institute.

Traffic planning, traffic control measures, traffic improvements and traffic engineering administration were among the items considered in making the awards. More than 800 cities and states submitted entries in the inventory program, which is designed as a self-evaluation of the traffic safety program of a city or state. The awards made by ITE were all designated as "for maintaining a high level of performance in traffic engineering in 1960," and no ranking was indicated by the judges.

The states receiving awards were: California, Connecticut, Maryland, Michigan and Rhode Island.

THE MAIL BAG

Accentuate the Positive

I just read the article titled "Installation and Use of Seat Belts" on page 22 and 23 of TRAFFIC SAFETY Magazine for August, 1961.

I was disappointed to see the second paragraph open with the sentence, "The strongest seat belt available is completely useless unless it is properly installed." In the first place this statement is false and secondly, it is a statement like this that causes people to lose faith in the protection they get from seat belts. It would be more appropriate to state that maximum protection can be had when seat belts are properly installed.

The writer of the article should understand that seat belts effectively package the wearer when exposed to forces far less than forces of a head-on collision, and that having any quality of seat belt even when not entirely properly installed will cushion the impact somewhat and possibly reduce the severity of the injury or save the occupant from death.

I'm not advocating a sloppy installation, however, I know that the misleading statement quoted above can cause car owners to question the value of seat belt installations, and cause occupants to fail to wear the belts.

Samuel F. Glazer
Safety Director
General Telephone Co.
of Wisconsin

Mountain Driving

In a recent issue of your publication, in discussing the use of the Land Rover in mountains, the statement is made, "When we came through the Rockies, we used an old trick of mine for making a car perform well in high altitudes: I mixed a pint of diesel oil with 10 gallons of petrol to make the fuel heavier at those heights."

From my experience in driving at high altitudes, this seems completely contrary to intelligent practice. The only purpose that the oil would serve would be to seal the piston rings and valves a little better; but, when the oil is mixed in this manner, I believe that combustion would be interfered with, ping emphasized.

As I recall our procedure in driving from Lima, Peru at sea level to mountainous country over 12,000 feet high, we had to retard the spark to get better performance.

Perhaps Mr. Mate intended to reduce excessive evaporation from his gasoline tank. Can you give us his reasons for the oil treatment?

H. Somerfeld
Safety Engineer
City of Los Angeles

Unfortunately, we have been unable to locate the Mates who are undoubtedly still on their world tour, so we cannot find out the reasons for the oil treatment.

Imhoff Fan

The article by Mr. Chris Imhoff, page 32, June issue, TRAFFIC SAFETY . . . is one of the finest practical articles to appear in TRAFFIC SAFEY in over two years in our humble opinion. We are looking forward to the others in this series.

Glenn Darlington
B-G Detection Service
Burbank, Calif.

A Good Idea

After reading and seeing accidents caused by flat tires (fixing of same on highways) a thought came to me and I'm passing it on to you for what it's worth.

Why not paint the inside of the trunk lid with a white or yellow luminous-type paint.

I'm sure this would attract oncoming cars to veer away or at least caution them.

I do not feel this would harm car value in any way.

William Kuell
Union, N. J.

Sniffers Anonymous

We noted with interest a paragraph in a recent issue of TRAFFIC SAFETY, which seemed to indicate that the nefarious and dangerous practice of "glue sniffing" has not yet become a problem in the Middle West. Here it has stirred up quite a storm in some quarters.

It first came to the attention of the Spokane Area Safety Council about two months ago, at which time the poison center asked us if we could do something to publicize its hazards, but which we were requested not to undertake by the chief of police, who was apprehensive that description of the hazards might serve only to spread its practice in this area.

It is reported to have originated in that capital of Zanyland, Los Angeles, where some enterprising teenager discovered that he got a lift out of sniffing the cement he used to construct his model airplanes. It quickly gathered momentum, accepted practices of sniffing were developed, and if it keeps growing, we may soon see an organization of Sniffers Anonymous.

Accepted practice is to squeeze a certain amount of model cement into a plastic bag, hold the bag over the mouth and nose and inhale deeply several times, shaking the bag out to fill it with air between each sniff. Effects are guaranteed to arrive much faster than by imbibing alcohol.

The catch is that practically every cement on the market is loaded with various aromatic hydrocarbons which attack such parts of the human body as the kidneys, liver, assorted glands, and the nervous system, these effects being cumulative. For details, consult your nearest poison center.

To become serious at last, glue sniffing as it is being practiced here in the Pacific Coast area, is no joke. Marihuana is innocuous compared to potent cumulative damage which cement smelling produces.

E. M. Gearhart, Jr.
Managing Director
Spokane Area Safety Council

BOOSTER MATERIALS

ORDERS FOR NEW POSTERS SHOWN CANNOT BE SHIPPED UNTIL AFTER OCTOBER 1

NIGHT DRIVING

Although night driving is different, many drivers don't understand just how different it is. They cling to their daytime driving habits when darkness falls.

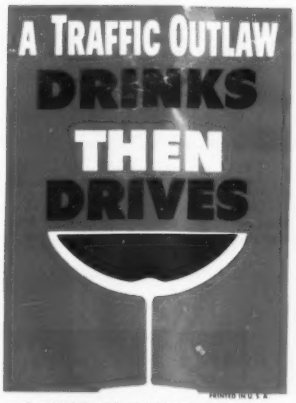
The dangerous early evening hours are called "The Twilight Trap"—and for good reason: As daylight fades into twilight, drivers do not adjust to changing light conditions. They blunder into a setting in which daylight is slipping away and it is too early for their headlights to do much good.

To educate the motorist about the problems of driving during twilight and in the dark, NSC has prepared a new 12-page booklet called "Driver in the Dark." This 2-color, profusely illustrated booklet is filled with handy tips on night driving. It quotes statistics, discusses city versus rural driving, the importance of good vision and proper headlight performance, and many other useful topics. The booklet contains a chart on stopping distances to emphasize the necessity to slow down after dark.

There is a section on judgment, especially important on limited access roads, and one on superhighway nighttime operation which is especially valuable today. The booklet also passes on strategy for safety—a summary list of tips for safe, trouble-free motoring after dark.

You can reduce nighttime accidents in your community by ordering copies of Driver in the Dark now. Order by title and stock number. Driver in the Dark: Stock No. 399.11. Min. order 50. Each: 50—$.070; 500—$.062; 1000—$.054; 5000—$.046; 10,000—$.042.

NEW TRAFFIC POSTERS FOR DECEMBER POSTING

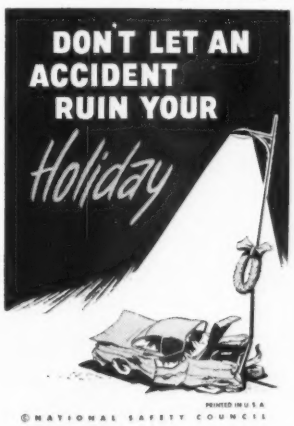


T-2218-C 25x38
T-2219-A 8½x11½

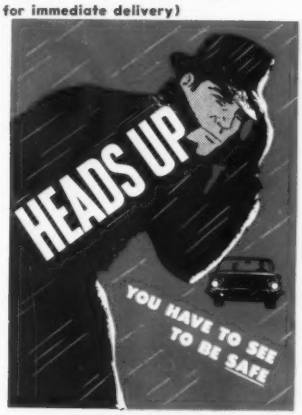
T-2220-B 17x23

ALTERNATE POSTERS FOR DECEMBER POSTING

(These posters may be ordered for immediate delivery)



T-2015-C 25x38
T-2016-A 8½x11½



T-2017-B 17x23

PRICES FOR ABOVE POSTERS

Traffic Posters—T-prefix to number

	1-9	10-99	100-999	1000-4999*
A Size	$0.19	$0.13	$0.077	$0.066
B Size	.35	.25	.21	.17
C Size	.44	.33	.26	.24

YOUR CREDIT LINE can be imprinted at time of the press run on Traffic B and C posters only. Orders for imprints on December posters above must be received by October 10, 1961.

Imprinting charges for these posters are $2.25 per lot plus an initial charge for each electroplate of $21.00 for C poster imprint and $12.50 for B poster imprint.

*Write for prices on quantities of 5,000 or more and for special rates on annual poster orders.

PRICES SHOWN ARE SUBJECT TO A DISCOUNT OF 10% TO NATIONAL SAFETY COUNCIL MEMBERS

FLEET POSTERS

POSTER PRICES

Posters illustrated on these pages are included in the automatic Motor Transportation poster services. Automatic poster sets are available on yearly subscription that provides (4) subjects per month viz. (2) "A" size (8½"x11½") and (2) "B" size (17"x23"). 281.31 Automatic service is provided in the following categories:

City Truck	City Bus	Annual price 1-4 sets, $9.90; 5-49, $7.80; 50 or more, $6.44.
Intercity Truck	Intercity Bus	
Sales Truck	Taxicab	
Truck Terminal	Bus Terminal	

Posters are available for indivdual selection at the following prices:

	1-9	10-99	100-999	1000-4999*
A size	$0.19	$0.13	$0.077	$0.066
B size	.35	.25	.21	.17

All prices shown are subject to a 10% discount to National Safety Council Members. *Write for prices on quantities of 5,000 or more. See page 29 for prices of posters with T-prefix.

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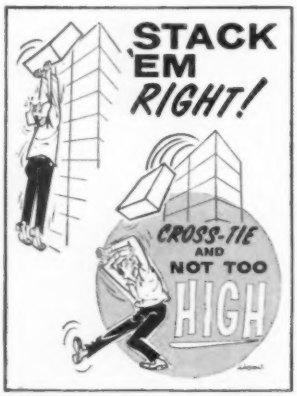
V-2193-B 17x23



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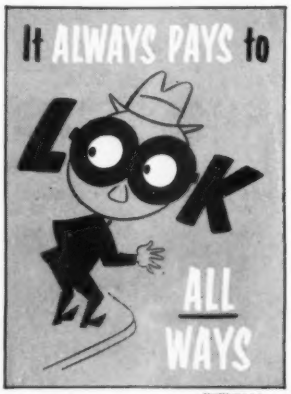
2008-A 8½x11½



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T-2163-B 17x23

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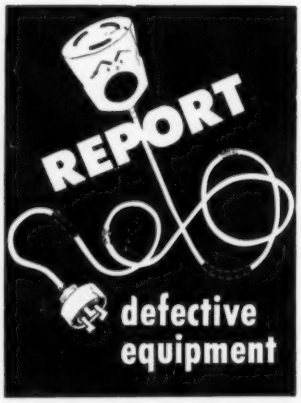
2000-A 8½x11½

NATIONAL SAFETY COUNCIL

0187-B 17x23

NATIONAL SAFETY COUNCIL

0166-B 17x23



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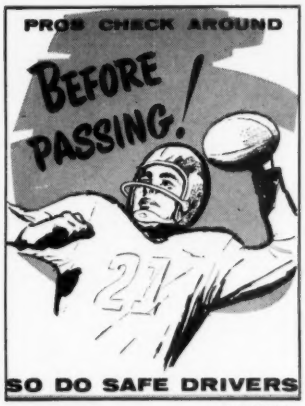
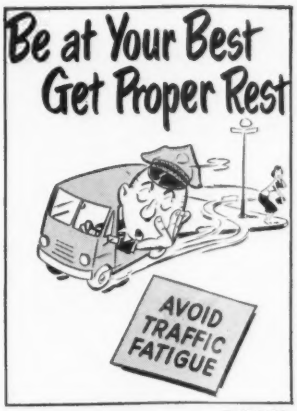
0993-A 8½x11½



V-2191-A 8½x11½



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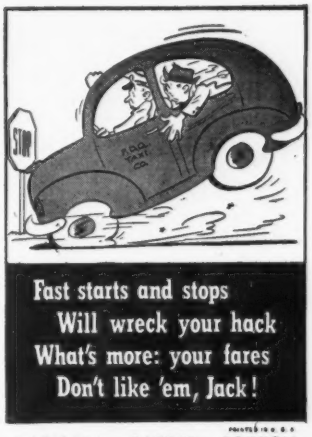

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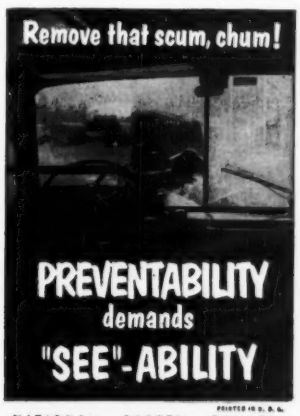
V-0887-A 8½x11½

V-9391-B 17x23

V-0522-A 8½x11½

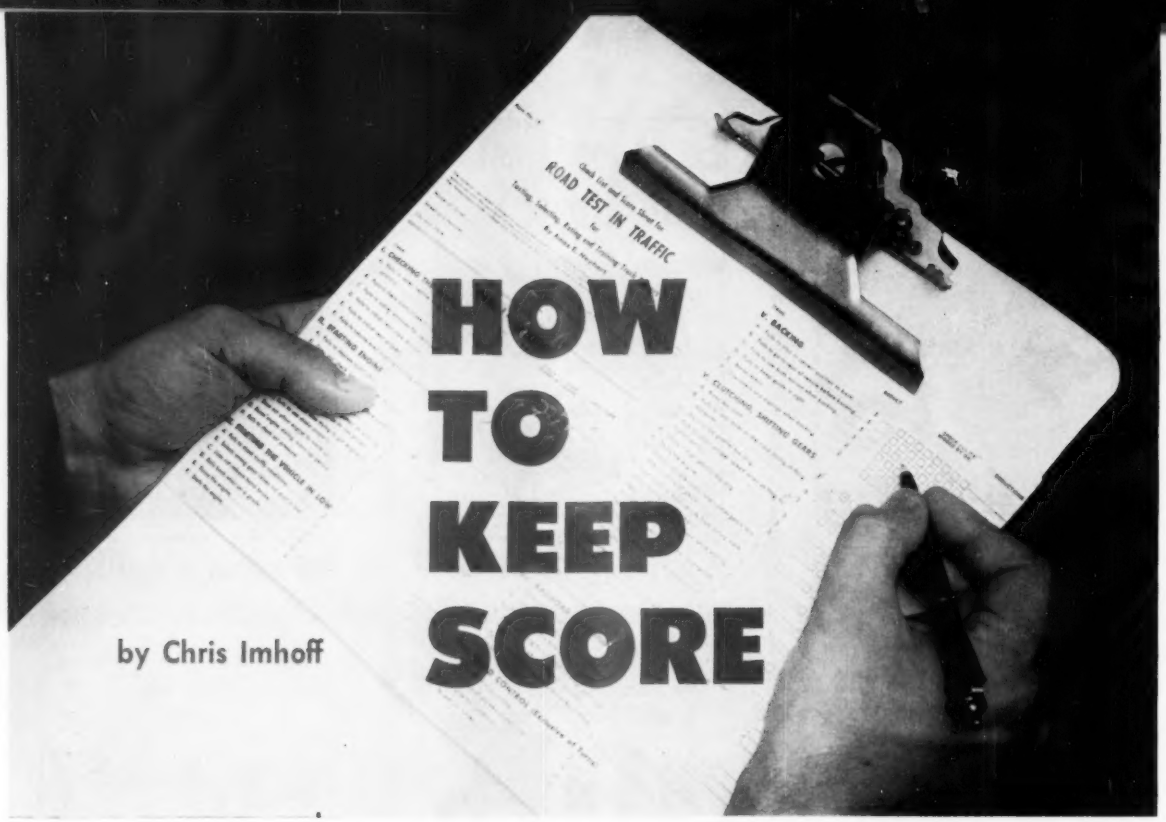


V-0171-A 8½x11½

Prevent SQUEEZE PLAYS
on Right Turns
Give turn signals and check right mirror
keep close enough to the curb to block out other vehicles

V-1087-B 17x23

V-9819-B 17x23



HOW TO KEEP SCORE

by Chris Imhoff

IMAGINE, if you can, a basketball game in progress with both teams on the floor passing the ball back and forth and lacadaisically shooting baskets. No one is counting the baskets or crediting them to any particular team or individual player. The audience is about as apathetic as the players. They are reading newspapers, nodding in their seats or carrying on fitful conversations.

Now let's blow the whistle and bring this pointless gymnastic exhibition to a halt. Over the public address system we explain that from now on, the game will be played according to certain rules and that each basket will be counted and credited to the team and individual making it.

Chris Imhoff is assistant manager of the National Safety Council's motor transport department.

This is the fourth in a series of articles written to show the small business manager how to influence employes to drive company delivery trucks or passenger cars better. The article may be reprinted in community or company publications, or it may provide ideas for use in speeches and in private conversations.

The whistle toots and the play is resumed. Now the teams play fiercely and competitively with each player striving to do his best. The gymnasium rocks with noise and excitement. Spectators and players alike become intensely absorbed in who has the ball and what is done with it. The game now has interest and point and is fun for everybody.

The Score's the Thing

Giving an activity point and meaning is just as important in the organization of a better driving program in the small fleet. One can set up clear cut rules defining acceptable safe driving performance. One can provide all the training help possible to show drivers how to meet this standard of performance. But unless one also keeps score on individual safe driving performance (and employes know that score is being kept) they will be no more enthusiastic than the players in our pointless basketball game.

The first step in keeping score is to adopt a strict company rule that employes must *report every vehicle accident in which they are involved.* Reporting simply means completing a standard accident report form and turning it in to the fleet manager. If the report is accurately and completely made out, it will contain all the essential information about how the accident happened, what it involved, what led up to it and the main factors contributing to it.

The proper operation of this rule rests on defining what one means by an "accident." Accidents come in various sizes ranging from the spectacular crash resulting in fatalities or personal injuries to the small fender dent involving only a few dollars in repair costs. What kind of accidents should we report? All of them? Or just the big ones? And if so, where shall we draw the line? This is vitally important in keeping score as any seasoned safety director will testify.

Off hand, the practical-minded, small-business man would probably answer, "Let's concentrate on the big accidents. These are the expensive ones and the kind I want to avoid. The small ones I can take in stride as a necessary part of operating a fleet of delivery trucks or passenger cars."

But fleet accident prevention does not work that way. One does not pick out the size of the accidents one is

trying to prevent. To prevent the big accidents, one must work at preventing them all, the small ones as well as the big.

The reason for this is that *accidents do not happen, they are caused.* After an accident has been caused by something, the resulting damage is purely a matter of chance. The same cause may result in a minor fender dent on one occasion and in a fatality on another. The real focus of all accident prevention work is the identification and removal of accident causes. Remove the cause and you automatically prevent whatever size accident might have resulted from it.

Furthermore, *accident causes tend to run in a series.* Unless something is done about removing or controlling the cause, it will tend to crop up again and again causing near misses or accidents of varying degrees of severity.

In the majority of motor vehicle accidents, the cause is human failing. Most accident causes are to be found in faulty driving habits such as following too closely, speed too fast for conditions, failure to come to a complete stop at a stop sign, etc. A bad driving habit is bound to result sooner or later in an accident unless it is properly identified and corrected.

A Good Tip-off

For that reason, there are no big or little accidents as far as accident prevention is concerned. Every preventable accident is proof positive that something is wrong in your organization and a golden opportunity to nip it in the bud.

With that view of the import of any size accident, we are ready to draw the line and state what kind of occurrences drivers must make a written report of. Drivers should report every incident that fits the following definition—"... *any contact between employed driver's vehicle and another vehicle, person, or fixed object which results in death, personal injury, or property damage. Such contact must be reported as an accident regardless of who was hurt, what property was damaged or to what extent, where it occurred, or who was responsible.*"

The rule requiring a report of every such incident must be strictly enforced. Penalties for failure to report an accident should be substantial. In the large commercial fleets, such a failure is often cause for automatic discharge.

The second step in keeping score is to decide whether each accident reported is preventable or non-preventable. Since the standard of professional driving performance is to avoid preventable accidents, we must decide in each case whether the accident was or was not preventable by our driver.

This step in the score-keeping function is usually handled by calling the driver in for an interview. During the interview, the business manager goes over the accident report and discusses the circumstances of the accident with the driver. Based on his study of the accident report, the information developed in discussing the accident with the driver, his knowledge of defensive driving and accident preventability, the business manager must determine whether the driver could have prevented the accident or not.

This interview is far more important than the mere keeping of score, it is a training situation of the utmost value. Driver and business manager have a concrete accident case before them. Here is an accident that actually happened and here is the driver who had it. In the accident under discussion, the driver either measured up to the standard of safe driving performance or he fell short of it.

Two brief examples will illustrate the general line of discussion at such interviews. Our driver was stopped at a stop light. The light changed to green and he moved into the intersection only to have a collision with a vehicle coming from the right. Our driver may claim that it was the other driver's fault since he violated the traffic signal. The business manager, who knows the principles of defensive driving, points out that the illegal act of another driver does not excuse our driver if our driver could have prevented the accident. Our driver should have checked to the left and right to make sure traffic at both sides had come to a halt before he put his own vehicle in motion. Had he so checked he would have seen the other vehicle moving through and having seen the other vehicle he would have yielded the right of way in order to prevent the accident.

After all, we know for a fact that drivers do not always obey traffic signs and signals. It is only reasonable to expect our driver to make sure other drivers are responding to traffic signals before he himself moves into the intersection. This accident is therefore, "Preventable." After receiving this decision, our driver will undoubtedly be more careful at intersections in the future.

In another instance, our driver backed into a garbage can in a cramped parking space behind a store he was servicing. He may claim that the accident should be graded "Non-Preventable" because the conditions were crowded and the damage slight, and the store owner was helping him and signalling him to back up.

No Alibis

The business manager must point out that the difficulties present and the slight amount of damage resulting have no bearing on the question of whether the accident could have been prevented or not. Crowded conditions are part of the environment all drivers must cope with. The more difficult the situation, the more skill is demanded. True, the damage may only have been a demolished garbage can, but in another instance, it could have been a child on a bicycle. Furthermore, even though the driver uses a guide, it is still his responsibility to back safely. In the situation before us, our driver fell short of acceptable standards of skill and the accident must be graded preventable. The next time he drives in that area, he will realize that a great deal more care, patience and alertness are demanded of him.

A useful device for building interest in avoiding preventable accidents is to post individual driver performance ratings. National Safety Council "Form Vehicle-10" was designed for this purpose. This form provides a column for entering the names of all drivers and columns for each month of the year. At the end of each month, scores are posted for each driver. Drivers who have not had any accidents are given a gold star for the month. Drivers who have had a non-preventable accident are given an NP. A big fat "P" for "Preventable" is entered in the square for drivers who have had a preventable accident during the month.

Such an accident score board lets all

the "players" know what each is doing in the way of safety performance and provides an additional incentive to better driving.

In summary, then, the score-keeping phase of your program requires these steps:

1. Adopt a definition of an accident.
2. Require drivers to report every accident.
3. Discuss each accident with the driver involved and decide whether it is preventable or non-preventable.
4. Keep a systematic record of the safety performance of each driver.
5. Post the results so that all drivers may see.

Forestalling Trouble

"But," the sharp minded business manager will ask, "does one have to wait for a driver to have an accident before correcting sub-standard performance?" Every veteran fleet safety director will answer this with a resounding "NO." There are certain techniques for spotting sub-standard performance before accidents result and the business manager should learn to use them. Here are the thoughts of some of the nation's top safety directors on the subject. Not all of these views may be applicable in the small fleet, but we will list them anyway because they may suggest adaptations that the small fleet manager can use.

Karl Schulze, senior safety engineer, western operations, Standard Oil Co. of California states, "All acts that a supervisor can perform to supervise are acts that can detect sub-standard driving performance or any other kind of performance. He can and should use primarily his personal observations of the driver's performance, but he can also make use of driver trainer reports, road patrol reports, arrest records, credit union records and the common gossip that he hears. Correction, if any is needed, lies with the usual supervisory corrective methods — ratings and appraisals, discussions, educational programs, safety meetings, disciplinary action, etc."

Excessive repair bills can be an index to sub-standard driving performance, according to C. E. Ehrenberger of Standard Brands. He says, "We relate excessive car or truck repairs to bad driving practices. There is a relationship between driving as reflected by repairs and accidents. A 'rough' driver has an accident potential where a 'smooth' driver handles his vehicle without jerks or abrupt moves and makes easy starts. Consequently, he seems more alert to accident hazards and ready for any emergencies."

Ehrenberger also believes in the value of occasional check-rides with driver-trainers. He cites the following example of a typical check-ride report made by a Standard Brands driver-trainer which indicates what a typical driver-trainer looks for when "checking out" a driver.

Driver John Doe—July 1, 1961—Driving Score 55

There is much room for improvement as follows:

1. Driver heads into dead-end alley or delivery platform instead of backing in. This is a dangerous practice, and causes him to back out into traffic.

2. He was observed to rev his engine too fast in second gear. He should rev up his engine just enough to relieve strain on engine, then change to next higher gear.

3. This driver has habit of slipping clutch when making turns. This should never happen as vehicle is out of speed. Control can easily be lost.

4. Twenty-five per cent of the time he parks his vehicle out of gear.

5. To improve his driving he should:

a. Enlarge his viewing habit.

b. Before starting through green light, check both directions.

c. While in traffic, keep on checking other traffic through mirrors.

d. Keep moving his eyes, rather than keep them fixedly staring ahead.

Bert L. Wheat, safety director for Eastern Express, Inc., says, "It is not difficult to learn of sub-standard performance if any supervision is exercised over line-haul operations at all. One way is through cooperative road patrol observation reports. A second is through comments by other drivers. A third is through arrest notices issued by the various states of which the company receives a copy. A fourth way is if any type of mechanical supervision is in practice, such as punching line-haul driver trip-reports, tacographs, or checking of driver's logs for verification of accuracy."

Wheat also looks for subtler indications of below-par performance. "My advice to supervisors," he says, "is that they be constantly on the alert for little things that come to their attention, that they thoroughly investigate driver's activities, and that they have heart-to-heart counselling sessions with drivers. Perhaps if direct contact with a driver is in vain, a telephone call to the wife, if properly handled, can have a little more influence."

The superintendent of transportation and safety for a famous newspaper, Lorne F. Purves, of the *Toronto* (Canada) *Star* also believes that little things are important in heading off accidents.

"Usual complaints from other drivers or pedestrians are a good barometer of deteriorating performance in a professional driver. At the time that the first or second incident has taken place, the supervisor who knows his job can usually determine the disposition or psychological reactions that are leading up to the type of belligerence or indifference that may lead to an unnecessary accident."

"It is always wise," says Purves, "to attempt to determine the reason for any change in attitude and be able to 'root out' an imaginary problem that may exist in the driver's mind."

Letting Off Steam

He goes on to say, "Sometimes it is important for the company to lose the services of a driver for a day by reassigning him to dock or warehouse work where he may work off a disturbed emotional state created by imaginary job problems. This therapy gives him an opportunity to do a different type of work for that day and also gives him an opportunity to slow down."

The small business man by this time may be somewhat dismayed that the problem of sub-standard performance has a psychological basis. It has indeed, as does every type of sub-standard work performance, and the business manager may as well take note of it.

Earle S. Hannaford, safety engineer, Long Lines Department, American Telephone and Telegraph Co., and one of the nation's top safety experts, has pointed out some of the typical symptoms of accidents-in-the-making

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PATROL CAGE PAYS BONUS IN POMPANO BEACH

by James E. Boggs

Patrol car before and after crash in which it rolled over three times. Driver walked away from wreck with minor ankle injuries.

Pompano Beach, Florida is located on the lower east coast of Florida, approximately midway between Palm Beach and Miami. Its climate is semi-tropical which necessitates ventilation nearly all the time.

Our citizens are from all over the United States and Canada, and lately from the Islands and South America. They include retired millionaires, semi-retired people, winter and summer vacationers, and poorly educated migrant laborers who follow the sun and work on the farms in the vicinity of the city. This diversified type of population, many of whom have no roots in the area, present many problems which are peculiar to the area. We have the cream of the jewel thieves, the best con men, and the criminal who shoots, cuts, and maims on the slightest provocation.

I took over as chief of the Pompano Police Department after retiring as police chief of a northern town. The department which I had left operated two men to a car. In Pompano, they were operating a one-man patrol car of standard make, which offered no protection to the police officer. I was faced with a safety problem for the officer and a security problem in keeping the prisoner in custody while the officer completed his investigation.

In seeking the answer to the problem I discussed it with many people. Bruce Blount, a city commissioner, came up with the answer. He suggested that cages be fabricated for the rear part of the car.

This problem was given to a local pre-fabrication metal plant, and a diamond shaped metal screen was proposed and made. The metal was described as ¾" x #9, approximate

James E. Boggs is chief of police of the City of Pompano Beach, Fla.

1.80 strength, which is framed in ¾" angle iron. This was placed immediately in the rear of the front seat and around the side windows on both sides of the rear seat. The cage was painted the same color as the interior of the car, and the door handles were removed to prevent the prisoner from opening the door.

The driver was protected from an unruly prisoner and was permitted to drive his car in safety. Also, when he placed the prisoner in the rear of the car, he could conduct his preliminary investigation within the vicinity of the car, secure in the knowledge that the prisoner would remain in custody.

We were very well satisfied with the installation, which was made at a cost of less than $25.00 per car for the material and the labor, which is now provided by the city mechanic.

But we soon found out that our new car was even better than we thought. On January 24, 1961, an officer on patrol was hit broadside by a Cadillac sedan which ran a Yield Right of Way sign, turning the patrol car sideways on the road and causing it to roll over three times—making three complete revolutions. The driver escaped with minor injuries to his ankle.

On inspecting the car after the accident, we found that we were the recipients of a bonus feature in our cage. The patrol car was completely demolished, the rear end knocked loose from the frame, and still the top of the car was within an inch, to an inch and a half, from the original level. In other words, the cage had acted as a *roll bar* in a racing car. It had prevented the top from coming down on the officer.

I would strongly recommend to all police departments that they investigate the advantages of placing such an installation in their cars whether they operate one- or two-man cars. If two-man cars, the safety of unhindered operation at the scene and on the way to the station, or while waiting for the patrol wagon to come for the prisoner, is in itself worth the cost. Of course, the advantage to a one-man operation is obvious. And the safety feature of the built-in roll bar is a terrific bonus to either type of operation.

Congress Luncheon Speaker

Dr. Carl C. Byers, well known educator and after-dinner speaker will address the National Fleet Safety Contest Award luncheon in the grand ballroom of the LaSalle Hotel, Chicago, on Thursday, October 19, 1961.

The luncheon, an annual Congress highlight, is held in honor of the winners of the National Fleet Safety Contest. Since 1948 it has been sponsored by General Motors Corp.

Dr. Byers has addressed hundreds of banquets, luncheons, civic meetings, educational groups, graduation classes and conventions throughout the Midwest during the last 10 years. He is an exponent of the theory that people would live longer and more abundantly if they would swap their worries for laughs.

A former superintendent of the Parma Public Schools in suburban Cleveland, Byers is active in Ohio and national educational affairs. Since 1944 he has authored 50 articles published in the *American School Board Journal*, the *Nation's Schools*, the *School Executive* and other educational journals. He also writes a syndicated newspaper column of humor and philosophy entitled "Philosophun."

Carl C. Byers

The National Fleet Safety Contest, whose winners will be honored at the luncheon, is the largest motor vehicle fleet safety contest in the United States and numbers more than 2,750 motor transportation fleets among its participants.

Ronald Nelson Joins NSC Staff

Ronald W. Nelson has joined the staff of the motor transport department of the National Safety Council. He succeeds Dean A. Dranias as editor of the commercial vehicle, transit and school bus newsletters.

Ronald Nelson

Nelson was born in Evanston and attended the University of Cincinnati, where he was chief photographer for the university publications. In that capacity he photographed many serious automobile accidents and developed an interest in safety work.

While attending the university, he also did part-time volunteer work for the Greater Cincinnati Safety Council. He served as coordinator for the Clifton Safety Committee, a Cincinnati group that worked with local officials to introduce improved traffic engineering methods to correct a high accident location.

Nelson is an ardent advocate of automobile seat belts and for some months sold them door-to-door as a hobby.

He has done free-lance writing, pamphlet editing, debating and television lecturing.

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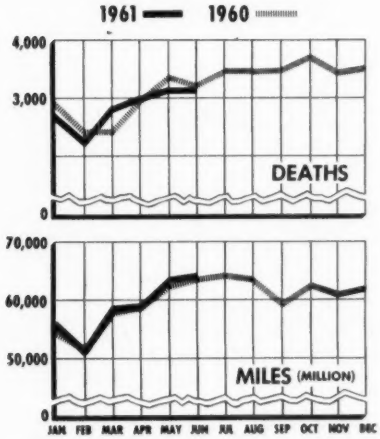
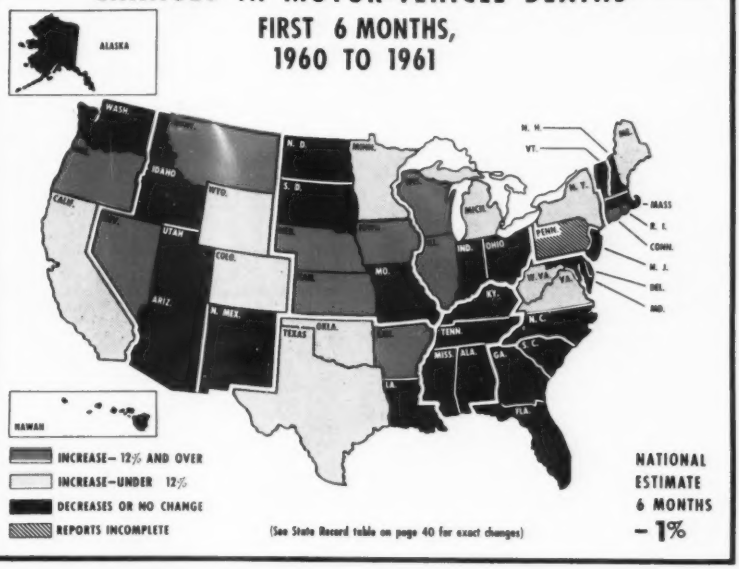
deaths per 10,000 registered vehicles were:

	Reg. Rate	Pop. Rate
Group I (Over 1,000,000 Pop.)		
Los Angeles, Calif.	2.6	13.7
Chicago, Ill.	2.9	8.0
Detroit, Mich.	2.9	11.0
Group II (750,000 to 1,000,000 Pop.)		
Washington, D. C.	1.3	4.7
Cleveland, Ohio	1.9	6.2
Houston, Tex.	2.1	9.4
Group III (500,000 to 750,000 Pop.)		
Buffalo, N. Y.	1.3	5.6
Seattle, Wash.	1.7	9.0
Milwaukee, Wis.	1.8	6.5
Group IV (350,000 to 500,000 Pop.)		
Portland, Ore.	1.8	11.8
Kansas City, Mo.	1.9	5.9
Fort Worth, Tex.	1.9	10.1
Group V (200,000 to 350,000 Pop.)		
Charlotte, N. C.	1.2	6.0
Albuquerque, N. M.	1.3	6.0
Providence, R. I.	1.4	6.7
Group VI (100,000 to 200,000 Pop.)		
South Bend, Ind.	0.0	0.0
Allentown, Pa.	0.0	0.0
Montgomery, Ala.	0.3	1.5
Group VII (50,000 to 100,000 Pop.)		
Alexandria, Va.	0.0	0.0
Binghamton, N. Y.	0.0	0.0
Kenosha, Wis.	0.0	0.0
Group VIII (25,000 to 50,000 Pop.)		
Redwood City, Calif.	0.0	0.0
Anderson, Ind.	0.0	0.0
Boise, Idaho	0.0	0.0
Group IX (10,000 to 25,000 Pop.)		
Medford, Ore.	0.0	0.0
Pampa, Tex.	0.0	0.0
Covina, Calif.	0.0	0.0

MONTHLY MOTOR VEHICLE DEATHS AND TRAFFIC TRENDS



CHANGES IN MOTOR-VEHICLE DEATHS
FIRST 6 MONTHS, 1960 TO 1961



(See State Record table on page 40 for exact changes)

MOTOR VEHICLE DEATHS AND CHANGES

Months	DEATHS				PERCENTAGE CHANGES				
					Corresponding Months			4 Mos. Mov. Ave.*	
	1956	1959	1960	1961	1956-1961	1959-1960	1960-1961	1959-1960	1960-1961
January	2,954	2,824	2,890	2,660	—10%		— 8%		— 2%
February	2,652	2,401	2,380	2,280	—14%		— 4%		— 5%
March	2,940	2,879	2,400	2,810	— 4%		+17%		— 1%
April	2,970	2,680	2,960	2,990	+ 1%		+ 1%		+ 1%
May	3,094	3,199	3,330	3,130	+ 1%		— 6%		+ 1%
June	3,338	3,138	3,210	3,110	— 7%		— 3%		+ 1%
6 months	17,948	17,121	17,170	16,980	— 5%		— 1%		
July	3,555	3,286	3,450			+ 5%		+ 5%	
August	3,535	3,502	3,470			— 1%		+ 3%	
September	3,653	3,381	3,490			+ 3%		+ 2%	
October	3,476	3,386	3,690			+ 9%		+ 4%	
November	3,603	3,527	3,430			— 3%		+ 2%	
December	3,858	3,707	3,500			— 6%		+ 1%	
Total	39,628	37,910	38,200						

All 1956 and 1959 figures are from the National Office of Vital Statistics. The 1960 and 1961 figures are National Safety Council estimates.

The 1961 national estimate is arrived at by assuming that the percentage change from 1960 to 1961 in the states reporting for both years reflects the 1960-1961 change in the entire country. First reports are preliminary, so revisions are made from time to time as later reports are received for the various months. Thus, figures above for 1961 may differ slightly from figures for the same months which will be published in future issues of TRAFFIC SAFETY.

*Four Months Moving Average is based on changes between the totals for four months instead of one month. For example, the June figure shows the change between the totals for March-June 1960 and March-June 1961, etc. Adding several months together tends to smooth out single month changes which may be affected by differences in the number of weekends in a month from one year to the next, random variations, etc.

TRAFFIC DEATHS—CITY RECORDS

The table covers only motor-vehicle deaths resulting from traffic accidents that occurred in the city. Nontraffic motor-vehicle deaths (where the accident occurred on home or work premises) are not included; nor are deaths in the city from accidents occurring outside.

Rankings are based on the 1961 registration death rate which is the number of deaths per 10,000 registered motor vehicles on an annual basis. Vehicle registration figures are for the year 1960 and were supplied by R. L. Polk & Co.

Cities are ranked by registration death rates—from low to high. When two or more cities have exactly the same rate, ranking is by total vehicle registrations—from large to small.

Cities shown in heavy type have improved in 1961 compared with 1960.

The population death rate is the number of deaths per 100,000 population on an annual basis. Populations are as of April, 1960, or later censuses taken by the U. S. Bureau of the Census.

	Six Months 1961	1960	1959	1961 Reg. Rate	1961 Pop. Rate
ALL REPORTING CITIES				2.0	8.4
Group I (1,000,000 and over)					
1. Los Angeles, Calif.	170	193	156	2.6	13.7
2. Chicago, Ill.	142	106	138	2.9	8.0
3. Detroit, Mich.	92	100	81	2.9	11.0
4. Philadelphia, Pa.	79	88	75	3.0	7.9
All cities in this group				3.0	8.4
5. New York, N. Y.	250	284	351	3.5	6.4
Group II (750,000 to 1,000,000)					
1. Washington, D. C.	18	43	33	1.3	4.7
2. Cleveland, Ohio	27	49	42	1.9	6.2
3. Houston, Tex.	44	38	61	2.1	9.4
All cities in this group				2.1	7.9
4. St. Louis, Mo.	36	35	40	2.5	9.6
5. Baltimore, Md.	44	63	48	2.7	9.4
Group III (500,000 to 750,000)					
1. Buffalo, N. Y.	15	27	24	1.3	5.6
2. Seattle, Wash.	25	22	20	1.7	9.0
3. Milwaukee, Wis.	24	23	25	1.8	6.5
4. Cincinnati, Ohio	20	33	27	1.8	8.0
5. San Antonio, Tex.	23	37	21	2.0	7.8
6. Pittsburgh, Pa.	22	30	24	2.2	7.3
7. San Francisco, Calif.	35	44	45	2.3	9.4
8. Dallas, Tex.	37	46	31	2.3	10.9
All cities in this group				2.3	9.1
9. New Orleans, La.	35	37	27	3.8	11.2
10. San Diego, Calif.	45	30	36	4.0	15.7
Group IV (350,000 to 500,000)					
1. Portland, Ore.	22	24	23	1.8	11.8
2. Kansas City, Mo.	14	32	20	1.9	5.9
3. Fort Worth, Tex.	18	17	18	1.9	10.1
4. Memphis, Tenn.	18	29	14	2.0	7.2
5. Atlanta, Ga.	22	29	32	2.2	9.0
6. Indianapolis, Ind.	25	29	13	2.2	10.5
7. Phoenix, Ariz.	23	31	26	2.3	10.5
All cities in this group				2.3	10.4
8. Oakland, Calif.	22	24	27	2.6	12.0
9. Minneapolis, Minn.	28	25	16	2.7	11.6
10. Louisville, Ky.	25	22	21	2.8	12.8
11. Denver, Colo.	35	25	22	3.0	14.2
Group V (200,000 to 350,000)					
1. Charlotte, N. C.	6	21	11	1.2	6.0
2. Albuquerque, N. M.	6	10	13	1.3	6.0
3. Providence, R. I.	7	5	7	1.4	6.7
4. Akron, Ohio	10	15	19	1.5	6.9
5. Dayton, Ohio	11	16	8	1.5	8.4
6. Rochester, N. Y.	12	10	4	1.7	7.5
7. Syracuse, N. Y.	7	8	3	1.7	6.5
8. Toledo, Ohio	14	12	5	1.8	8.8
9. Tucson, Ariz.	10	10	9	1.8	9.4
10. Richmond, Va.	10	16	10	1.9	9.1
11. Grand Rapids, Mich.	11	4	9	2.0	10.9
12. Miami, Fla.	19	13	23	2.0	13.0
All cities in this group				2.0	9.8
13. Des Moines, Iowa	11	5	9	2.2	10.5
14. Omaha, Neb.	15	6	17	2.4	9.9
15. Oklahoma City, Okla.	23	26	11	2.4	14.2
16. San Jose, Calif.	15	16	11	2.4	14.7
17. Long Beach, Calif.	20	23	13	2.5	11.6
18. Tampa, Fla.	19	19	14	2.6	13.8
19. Norfolk, Va.	12	10	6	2.6	7.8
20. Mobile, Ala.	12	13	14	3.4	11.8
Group VI (100,000 to 200,000)					
1. South Bend, Ind.	0	5	3	0.0	0.0
2. Allentown, Pa.	0	8	5	0.0	0.0
3. Montgomery, Ala.	1	5	3	0.3	1.5
4. Topeka, Kan.	1	0	5	0.3	1.7
5. Evansville, Ind.	2	6	8	0.6	2.8
6. Lansing, Mich.	2	3	5	0.6	3.5
7. Tacoma, Wash.	3	7	4	0.7	4.1
8. Glendale, Calif.	2	6	7	0.7	3.4
9. Madison, Wis.	2	1	3	0.7	3.2
10. Santa Ana, Calif.	2	4	6	0.7	4.0
11. Bridgeport, Conn.	2	8	6	0.7	2.6
12. Hartford, Conn.	3	3	3	0.8	3.7
13. Amarillo, Tex.	3	5	4	1.0	4.3
14. Salt Lake City, Utah	6	15	6	1.0	6.3
15. Trenton, N. J.	3	3	5	1.0	5.3
16. Little Rock, Ark.	3	6	3	1.1	5.6
17. Baton Rouge, La.	4	4	11	1.1	5.2
18. Utica, N. Y.	2	3	3	1.1	4.0
19. Rockford, Ill.	4	6	3	1.1	6.2
20. Erie, Pa.	4	5	1	1.2	5.8
21. Arlington, Va.	4	2	5	1.2	4.9
22. Canton, Ohio	4	4	1	1.3	7.0
23. Flint, Mich.	7	12	6	1.3	7.1
24. Worcester, Mass.	4	7	14	1.4	4.3
25. Berkeley, Calif.	4	3	4	1.5	7.2
26. Waterbury, Conn.	3	6	2	1.5	5.6
27. Austin, Tex.	6	5	10	1.6	6.4
28. Elizabeth, N. J.	3	3	3	1.6	5.6
29. Chattanooga, Tenn.	5	6	13	1.6	7.7
30. Winston-Salem, N. C.	5	3	3	1.8	9.0
31. Fresno, Calif.	8	6	7	1.8	11.9
32. Lincoln, Neb.	5	2	0	1.8	7.8
33. Spokane, Wash.	9	8	5	1.9	9.9
34. Fort Wayne, Ind.	8	9	6	1.9	9.9
All cities in this group				1.9	8.7
35. St. Petersburg, Fla.	11	22	16	2.0	12.1
36. Shreveport, La.	8	12	6	2.0	9.7
37. Niagara Falls, N. Y.	4	3	1	2.1	7.8
38. New Haven, Conn.	6	8	5	2.1	7.9
39. Cambridge, Mass.	3	2	1	2.1	5.6
40. Peoria, Ill.	6	9	0	2.1	11.6
41. Anaheim, Calif.	6	7	11	2.2	11.5
42. Knoxville, Tenn.	6	5	4	2.2	10.7
43. Springfield, Mass.	7	6	5	2.3	8.0
44. Torrance, Calif.	6	2	6	2.3	11.9
45. Pasadena, Calif.	8	6	9	2.3	13.7
46. Portsmouth, Va.	4	1	3	2.4	7.0
47. Yonkers, N. Y.	7	3	0	2.5	7.3
48. Sacramento, Calif.	16	14	12	2.5	16.7
49. Dearborn, Mich.	8	6	5	2.6	14.3
50. Gary, Ind.	9	6	7	2.6	10.1
51. Savannah, Ga.	8	5	5	2.7	10.7
52. Corpus Christi, Tex.	10	9	3	2.9	11.9
53. Greensboro, N. C.	8	6	6	2.9	13.4
54. Lubbock, Tex.	9	7	10	3.0	14.0
55. Kansas City, Kan.	11	12	7	3.1	18.0
56. Youngstown, Ohio	13	6	7	3.1	15.6
57. Beaumont, Tex.	8	2	10	3.2	13.4
58. Columbus, Ga.	9	0	6	3.6	15.4
59. Hammond, Ind.	7	5	8	3.7	12.5
60. Duluth, Minn.	10	4	7	4.3	18.7
61. Wichita Falls, Tex.	9	6	2	4.5	17.7
62. Newport News, Va.	8	6	2	4.9	14.1
63. Nashville, Tenn.	24	15	9	5.9	28.1
Group VII (50,000 to 100,000)					
1. Alexandria, Va.	0	2	3	0.0	0.0
2. Binghamton, N. Y.	0	1	1	0.0	0.0
3. Kenosha, Wis.	0	1	7	0.0	0.0
4. Aurora, Ill.	0	3	1	0.0	0.0
5. St. Clair Shores, Mich.	0	2	3	0.0	0.0
6. Evanston, Ill.	0	2	0	0.0	0.0
7. Pawtucket, R. I.	0	0	3	0.0	0.0
8. Johnstown, Pa.	0	2	3	0.0	0.0
9. New Britain, Conn.	0	3	2	0.0	0.0
10. Hampton, Va.	0	2	5	0.0	0.0
11. Lynn, Mass.	0	3	3	0.0	0.0
12. Santa Clara, Calif.	0	4	2	0.0	0.0
13. Oak Park, Ill.	0	2	0	0.0	0.0
14. Wauwatosa, Wis.	0	4	0	0.0	0.0
15. Irvington, N. J.	0	2	0	0.0	0.0
16. West Covina, Calif.	0	1	0	0.0	0.0
17. Euclid, Ohio	0	1	0	0.0	0.0
18. Pittsfield, Mass.	0	1	1	0.0	0.0
19. Bayonne, N. J.	0	2	1	0.0	0.0
20. University City, Mo.	0	0	1	0.0	0.0
21. West Hartford, Conn.	0	0	3	0.0	0.0
22. Meriden, Conn.	0	1	3	0.0	0.0
23. Kettering, Ohio	0	4	0	0.0	0.0
24. Raleigh, N. C.	1	8	3	0.4	2.1
25. Santa Monica, Calif.	1	1	3	0.4	2.4
26. Cedar Rapids, Iowa	1	0	0	0.5	2.2
27. Odessa, Tex.	1	2	2	0.5	2.5
28. Abilene, Tex.	1	3	5	0.5	2.2
29. Warren, Mich.	1	6	6	0.5	2.2
30. Sioux City, Iowa	1	1	11	0.6	2.2
31. Augusta, Ga.	1	4	3	0.6	2.8
32. Lake Charles, La.	1	1	3	0.7	3.2
33. Ann Arbor, Mich.	1	4	1	0.7	3.0
34. Manchester, N. H.	1	4	5	0.7	2.3
35. Orlando, Fla.	2	5	6	0.7	4.5
36. Covington, Ky.	1	5	2	0.8	3.3
37. Springfield, Ill.	2	3	3	0.9	4.8
38. Wheeling, W. Va.	1	2	0	0.9	3.7
39. Lwr. Merion Twp., Pa.	1	2	2	0.9	3.4
40. Decatur, Ill.	2	3	3	0.9	5.1
41. Springfield, Ohio	2	2	5	1.0	4.8
42. Charleston, S. C.	1	5	0	1.0	2.6
43. Lincoln Park, Mich.	1	4	2	1.0	3.7
44. Royal Oak, Mich.	2	4	8	1.0	5.0
45. Bloomfield, N. J.	1	2	0	1.0	3.9
46. Santa Barbara, Calif.	2	9	3	1.0	6.8
47. Racine, Wis.	2	6	0	1.0	4.5
48. Davenport, Iowa	2	3	3	1.1	4.5
49. Joliet, Ill.	2	1	3	1.1	6.0
50. Wilmington, Del.	3	2	4	1.1	6.3
51. Fort Lauderdale, Fla.	3	5	2	1.1	7.2
52. Macon, Ga.	2	6	4	1.1	5.7
53. Huntington, W. Va.	2	2	4	1.2	4.8
54. Bethlehem, Pa.	2	1	0	1.2	5.3
55. Billings, Mont.	2	2	0	1.2	7.6
56. Independence, Mo.	2	1	5	1.3	6.4
57. Bloomington, Minn.	1	6	0	1.3	4.0
58. Sioux Falls, S. D.	2	2	3	1.3	6.1
59. Kalamazoo, Mich.	3	5	1	1.3	7.3
60. Midland, Tex.	2	1	1	1.3	6.4
61. Compton, Calif.	3	6	6	1.3	8.4
62. East St. Louis, Ill.	3	2	5	1.3	7.3
63. Schenectady, N. Y.	3	0	1	1.3	7.3
64. Bay City, Mich.	2	2	3	1.3	7.5
65. Gadsden, Ala.	2	2	2	1.4	6.9
66. High Point, N. C.	2	6	1	1.4	6.4
67. New Rochelle, N. Y.	2	2	1	1.4	5.2
68. San Angelo, Tex.	2	3	4	1.4	6.8
69. White Plains, N. Y.	2	0	2	1.4	7.9
70. Saginaw, Mich.	4	2	1	1.5	8.1
71. Hamilton, Ohio	3	4	3	1.5	8.3
72. Newton, Mass.	3	3	4	1.5	6.5
73. Muncie, Ind.	3	2	1	1.6	8.7
74. Durham, N. C.	3	6	5	1.6	7.7
75. Burbank, Calif.	4	6	6	1.6	8.9
76. Colorado Spgs., Colo.	4	0	1	1.7	11.4
77. Waterloo, Iowa	3	4	1	1.7	8.4
78. Pueblo, Colo.	4	2	8	1.7	8.8
79. Stockton, Calif.	5	5	9	1.7	11.6
80. Warwick, R. I.	2	1	4	1.7	5.8
All cities in this group				1.7	7.6
81. Las Vegas, Nev.	4	9	2	1.8	12.4
82. Lynchburg, Va.	2	2	2	1.8	7.3
83. Lexington, Ky.	3	0	3	1.8	9.6
84. Tuscaloosa, Ala.	2	2	6	1.8	6.3
85. Wilkes-Barre, Pa.	3	2	1	1.8	9.4
86. Dubuque, Iowa	2	3	0	1.9	7.1
87. St. Joseph, Mo.	3	2	2	1.9	7.5
88. Lawton, Okla.	2	2	3	1.9	6.5
89. Lancaster, Pa.	3	4	2	1.9	9.8
90. Columbia, S. C.	5	4	3	2.0	10.3
91. San Bernardino, Calif.	6	8	10	2.0	13.1
92. Lorain, Ohio	3	3	1	2.0	8.7
93. Mount Vernon, N. Y.	3	1	3	2.0	7.9
94. Vallejo, Calif.	3	2	5	2.0	9.9
95. Norwalk, Conn.	2	3	3	2.0	5.9
96. Waco, Tex.	5	9	8	2.1	10.2
97. Waltham, Mass.	2	3	1	2.1	7.2
98. Lakewood, Calif.	3	2	2	2.1	8.9
99. Pontiac, Mich.	5	5	2	2.2	12.2
100. San Leandro, Calif.	4	2	1	2.2	12.1
101. Reno, Nev.	4	3	2	2.2	15.5
102. Arlington, Mass.	2	1	1	2.2	8.0
103. Roanoke, Va.	5	3	1	2.2	10.3
104. Passaic, N. J.	2	0	2	2.3	7.4
105. Palo Alto, Calif.	4	1	3	2.3	15.3
106. Fullerton, Calif.	3	2	0	2.3	10.7
107. Chicopee, Mass.	2	0	3	2.3	6.5
108. San Mateo, Calif.	4	0	1	2.4	11.4
109. Warren, Ohio	4	2	5	2.4	13.4
110. Lakewood, Ohio	3	2	3	2.4	9.1
111. Riverside, Calif.	6	5	6	2.5	14.2

	Six Months 1961	1960	1959	1961 Reg. Rate	1961 Pop. Rate
112. Reading, Pa.	6	4	3	2.5	12.2
113. Atlantic City, N. J.	**2**	**4**	**3**	**2.6**	**6.7**
114. Tyler, Tex.	4	0	2	2.6	15.6
115. Parma, Ohio	3	3	0	2.8	7.2
116. Great Falls, Mont.	4	1	1	2.9	14.4
117. Rock Island, Ill.	3	1	3	2.9	11.6
118. Eugene, Ore.	5	1	2	2.9	19.6
119. Medford, Mass.	3	0	0	2.9	9.2
120. Springfield, Mo.	7	6	2	3.0	14.6
121. Waukegan, Ill.	4	3	1	3.1	14.4
122. West Allis, Wis.	3	1	1	3.1	8.8
123. Terre Haute, Ind.	6	3	0	3.3	16.6
124. Brockton, Mass.	**4**	**6**	**5**	**3.3**	**11.0**
125. Pensacola, Fla.	6	2	4	3.3	21.1
126. Council Bluffs, Iowa	4	1	2	3.3	14.7
127. Roseville, Mich.	3	2	4	3.3	12.0
128. Charleston, W. Va.	5	4	6	3.3	11.7
129. Greenville, S. C.	6	6	2	3.5	18.1
130. Portland, Maine	5	1	1	3.5	13.8
131. Alameda, Calif.	4	2	2	3.8	13.1
132. Miami Beach, Fla.	6	4	5	3.9	19.0
133. Port Arthur, Tex.	6	4	6	4.1	18.0
134. Fort Smith, Ark.	5	2	4	4.1	18.9
135. Stamford, Conn.	7	4	2	4.2	15.1
136. Jackson, Mich.	6	2	3	4.2	23.7
137. Pasadena, Tex.	5	2	1	4.2	17.0
138. East Chicago, Ind.	4	4	0	4.6	13.9
139. Brookline, Mass.	4	4	2	4.6	14.8
140. Pomona, Calif.	8	5	4	4.8	23.8
141. Greenwich, Conn.	4	3	4	5.1	14.9
142. Livonia, Mich.	7	6	1	5.3	21.0
143. Richmond, Calif.	9	3	5	5.6	25.0

Group VIII (25,000 to 50,000)

1. Redwood City, Calif.	**0**	**1**	**1**	**0.0**	**0.0**
2. Anderson, Ind.	**0**	**1**	**1**	**0.0**	**0.0**
3. Boise, Idaho	**0**	**2**	**0**	**0.0**	**0.0**
4. Everett, Wash.	**0**	**1**	**3**	**0.0**	**0.0**
5. Lafayette, Ind.	**0**	**1**	**1**	**0.0**	**0.0**
6. Plainfield, N. J.	0	0	0	0.0	0.0
7. Whittier, Calif.	0	0	1	0.0	0.0
8. Appleton, Wis.	0	0	3	0.0	0.0
9. Englewood, Colo.	**0**	**1**	**0**	**0.0**	**0.0**
10. Bellflower, Calif.	**0**	**2**	**3**	**0.0**	**0.0**
11. Salina, Kan.	0	0	2	0.0	0.0
12. Oxnard, Calif.	**0**	**4**	**3**	**0.0**	**0.0**
13. Poughkeepsie, N. Y.	**0**	**1**	**1**	**0.0**	**0.0**
14. Richmond, Ind.	**0**	**1**	**1**	**0.0**	**0.0**
15. Cuyahoga Falls, Ohio	**0**	**3**	**0**	**0.0**	**0.0**
16. Port Huron, Mich.	**0**	**3**	**2**	**0.0**	**0.0**
17. Gastonia, N. C.	0	0	1	0.0	0.0
18. Gainesville, Fla.	**0**	**1**	**1**	**0.0**	**0.0**
19. Garden City, Mich.	0	0	0	0.0	0.0
20. Marion, Ohio	0	0	2	0.0	0.0
21. East Detroit, Mich.	**0**	**2**	**1**	**0.0**	**0.0**
22. Bloomington, Ind.	**0**	**1**	**1**	**0.0**	**0.0**
23. Boulder, Colo.	0	0	0	0.0	0.0
24. Portsmouth, Ohio	0	0	0	0.0	0.0
25. Menlo Park, Calif.	0	0	0	0.0	0.0
26. Hagerstown, Md.	**0**	**3**	**2**	**0.0**	**0.0**
27. Massillon, Ohio	**0**	**2**	**0**	**0.0**	**0.0**
28. Michigan City, Ind.	**0**	**4**	**0**	**0.0**	**0.0**
29. Sandusky, Ohio	0	0	2	0.0	0.0
30. Santa Cruz, Calif.	**0**	**1**	**0**	**0.0**	**0.0**
31. East Cleveland, Ohio	**0**	**2**	**1**	**0.0**	**0.0**
32. Janesville, Wis.	**0**	**1**	**1**	**0.0**	**0.0**
33. Manchester, Conn.	**0**	**2**	**0**	**0.0**	**0.0**
34. Wausau, Wis.	0	0	1	0.0	0.0
35. South Euclid, Ohio	**0**	**1**	**2**	**0.0**	**0.0**
36. Monrovia, Calif.	0	0	2	0.0	0.0
37. Westfield, N. J.	**0**	**1**	**0**	**0.0**	**0.0**
38. Easton, Pa.	0	0	1	0.0	0.0
39. Tackson, Tenn.	**0**	**1**	**0**	**0.0**	**0.0**
40. Baldwin Park, Calif.	0	0	0	0.0	0.0
41. Findlay, Ohio	0	0	0	0.0	0.0
42. Oak Park, Mich.	0	0	0	0.0	0.0
43. Minot, N. Dak.	0	0	2	0.0	0.0
44. Burlington, Iowa	**0**	**2**	**0**	**0.0**	**0.0**
45. Edina, Minn.	0	0	0	0.0	0.0
46. Rock Hill, S. C.	0	0	1	0.0	0.0
47. Fond du Lac, Wis.	0	0	1	0.0	0.0
48. Grand Island, Neb.	**0**	**1**	**1**	**0.0**	**0.0**
49. Richfield, Minn.	**0**	**1**	**1**	**0.0**	**0.0**
50. Steubenville, Ohio	0	0	1	0.0	0.0
51. Fitchburg, Mass.	**0**	**2**	**3**	**0.0**	**0.0**
52. West Haven, Conn.	**0**	**3**	**0**	**0.0**	**0.0**
53. Manitowoc, Wis.	**0**	**2**	**0**	**0.0**	**0.0**
54. Birmingham, Mich.	0	0	0	0.0	0.0
55. Iowa City, Iowa	**0**	**2**	**0**	**0.0**	**0.0**
56. Kirkwood, Mo.	0	0	1	0.0	0.0
57. Port Chester, N. Y.	0	0	0	0.0	0.0
58. Hackensack, N. J.	**0**	**1**	**2**	**0.0**	**0.0**
59. Sherman, Tex.	0	0	1	0.0	0.0
60. Burlington, Vt.	0	0	1	0.0	0.0
61. Brownsville, Tex.	**0**	**1**	**1**	**0.0**	**0.0**
62. Concord, N. H.	**0**	**2**	**2**	**0.0**	**0.0**
63. Amsterdam, N. Y.	0	0	1	0.0	0.0
64. Webster Groves, Mo.	0	0	0	0.0	0.0
65. Shaker Heights, Ohio	**0**	**2**	**0**	**0.0**	**0.0**
66. Madison Hgts., Mich.	0	0	2	0.0	0.0
67. Mt. Clemens, Mich.	0	0	0	0.0	0.0
68. Carlsbad, N. M.	0	0	1	0.0	0.0
69. Wilmette, Ill.	0	0	0	0.0	0.0
70. Fairmont, W. Va.	**0**	**1**	**0**	**0.0**	**0.0**
71. Revere, Mass.	**0**	**3**	**2**	**0.0**	**0.0**
72. Urbana, Ill.	**0**	**1**	**0**	**0.0**	**0.0**
73. Highland Park, Ill.	**0**	**3**	**2**	**0.0**	**0.0**
74. Cranford, N. J.	**0**	**1**	**1**	**0.0**	**0.0**
75. Leominster, Mass.	**0**	**3**	**1**	**0.0**	**0.0**
76. Lake Forest, Ill.	0	0	0	0.0	0.0
77. Enfield, Conn.	0	0	0	0.0	0.0
78. Belmont, Mass.	0	0	0	0.0	0.0
79. Yakima, Wash.	1	0	0	0.7	4.6
80. Battle Creek, Mich.	**1**	**2**	**1**	**0.8**	**4.5**
81. Hutchinson, Kan.	1	0	1	0.9	5.3
82. Elmira, N. Y.	1	0	1	0.9	4.3
83. Middletown, Ohio	**1**	**5**	**1**	**0.9**	**4.8**
84. Daytona Beach, Fla.	**1**	**3**	**2**	**0.9**	**5.3**
85. Rochester, Minn.	1	1	0	0.9	4.9
86. Pine Bluff, Ark.	1	0	0	0.9	4.5
87. Vancouver, Wash.	1	1	0	1.0	6.2
88. Zanesville, Ohio	1	0	1	1.0	5.1
89. Champaign, Ill.	**1**	**3**	**1**	**1.0**	**4.0**
90. Joplin, Mo.	1	1	0	1.0	5.1
91. Oshkosh, Wis.	**1**	**2**	**1**	**1.0**	**4.4**
92. Bellingham, Wash.	**1**	**2**	**0**	**1.0**	**5.8**
93. Muskogee, Okla.	**1**	**3**	**1**	**1.1**	**5.2**
94. Montebello, Calif.	1	0	0	1.1	6.2
95. Greeley, Colo.	1	0	1	1.1	7.6
96. Alton, Ill.	1	1	4	1.1	4.7
97. Mountain View, Calif.	1	0	1	1.1	6.5
98. Coral Gables, Fla.	1	1	2	1.1	5.7
99. Beloit, Wis.	1	1	0	1.2	6.1
100. Mishawaka, Ind.	**1**	**5**	**0**	**1.2**	**6.0**
101. East Hartford, Conn.	1	0	2	1.2	4.5
102. Teaneck, N. J.	1	1	1	1.2	4.8
103. Danbury, Conn.	1	1	0	1.2	5.1
104. Galesburg, Ill.	1	0	1	1.2	5.4
105. West Orange, N. J.	1	1	1	1.2	5.0
106. Woonsocket, R. I.	1	1	0	1.2	4.2
107. Bartlesville, Okla.	1	0	0	1.2	7.2
108. Rome, Ga.	1	1	1	1.2	6.2
109. Waukesha, Wis.	1	0	2	1.3	6.7
110. Big Spring, Tex.	1	1	3	1.3	6.4
111. Columbia, Mo.	1	0	2	1.3	5.4
112. National City, Calif.	**1**	**4**	**1**	**1.3**	**6.1**
113. Kankakee, Ill.	1	1	1	1.3	7.2
114. Mason City, Iowa	1	0	0	1.3	6.5
115. Fair Lawn, N. J.	1	0	0	1.3	5.5
116. Bangor, Maine	1	1	0	1.3	5.1
117. Ontario, Calif.	2	1	1	1.3	8.6
118. Austin, Minn.	1	1	0	1.3	7.2
119. Midland, Mich.	1	1	0	1.4	7.2
120. Goldsboro, N. C.	**1**	**4**	**3**	**1.4**	**6.9**
121. Lockport, N. Y.	1	0	0	1.4	7.6
122. Provo, Utah	1	0	0	1.4	5.6
123. Milford, Conn.	**1**	**4**	**0**	**1.4**	**4.8**
124. Hamtramck, Mich.	**1**	**2**	**0**	**1.4**	**5.9**
125. Redlands, Calif.	1	0	1	1.4	7.5
126. Temple, Tex.	**1**	**2**	**3**	**1.4**	**6.6**
All cities in this group				1.4	6.9
127. Tallahassee, Fla.	**2**	**3**	**0**	**1.5**	**8.3**
128. Mansfield, Ohio	2	1	0	1.5	8.5
129. Muskegon, Mich.	**2**	**3**	**0**	**1.5**	**8.6**
130. Kingsport, Tenn.	1	1	0	1.6	7.6
131. Grand Forks, N. D.	1	1	0	1.6	5.8
132. Freeport, Ill.	**1**	**2**	**0**	**1.6**	**7.5**
133. Rahway, N. J.	1	1	1	1.6	7.2
134. Aurora, Colo.	2	2	0	1.7	8.2
135. El Cerrito, Calif.	1	0	1	1.7	7.9
136. Chula Vista, Calif.	**2**	**4**	**1**	**1.7**	**9.5**
137. Denton, Tex.	1	0	3	1.7	7.5
138. Middletown, Conn.	1	0	1	1.7	6.0
139. New London, Conn.	**1**	**3**	**1**	**1.7**	**5.8**
140. Newark, Ohio	2	1	0	1.7	9.6
141. Wallingford, Conn.	1	0	3	1.8	6.7
142. Elyria, Ohio	2	2	0	1.8	9.1
143. Rapid City, S. D.	2	1	3	1.8	9.4
144. North Miami, Fla.	1	0	1	1.8	7.0
145. Anderson, S. C.	2	2	1	1.9	9.7
146. La Crosse, Wis.	2	2	2	1.9	8.4
147. Enid, Okla.	**2**	**3**	**1**	**1.9**	**10.3**
148. Newport, R. I.	1	1	2	1.9	4.3
149. Hazel Park, Mich.	**1**	**2**	**0**	**1.9**	**7.8**
150. Beverly Hills, Calif.	2	1	2	1.9	13.0
151. La Mesa, Calif.	2	2	1	2.0	13.2
152. St. Louis Park, Minn.	2	1	1	2.0	9.2
153. Cheyenne, Wyo.	3	0	2	2.0	13.8
154. Westminster, Calif.	1	1	8	2.0	7.8
155. Highland Park, Mich.	2	0	4	2.0	10.5
156. Sheboygan, Wis.	2	2	0	2.1	8.8
157. Ventura, Calif.	2	0	3	2.1	13.7
158. Danville, Va.	2	2	1	2.1	8.6
159. Wyoming, Mich.	**2**	**3**	**5**	**2.1**	**8.7**
160. Des Plaines, Ill.	2	2	0	2.1	11.5
161. Mesa, Ariz.	2	0	3	2.2	11.8
162. Elmhurst, Ill.	2	2	1	2.2	10.8
163. Barberton, Ohio	2	1	0	2.3	11.8
164. Linden, N. J.	2	2	0	2.3	10.0
165. Casper, Wyo.	3	1	0	2.3	15.4
166. Manhattan Bch., Calif.	2	0	0	2.4	11.8
167. Modesto, Calif.	3	1	0	2.4	16.4
168. Lackawanna, N. Y.	1	0	0	2.5	6.8
169. Bloomington, Ill.	2	1	0	2.5	11.0
170. Ft. Pierce, Fla.	2	0	7	2.5	15.8
171. Inkster, Mich.	2	1	0	2.6	10.2
172. Lawrence, Kan.	2	1	0	2.6	12.2
173. Park Ridge, Ill.	2	0	0	2.6	12.2
174. Fairfield, Conn.	2	1	7	2.6	8.7
175. Wilmington, N. C.	3	1	3	2.7	13.6
176. Norwich, Conn.	2	2	0	2.7	10.4
177. Owensboro, Ky.	3	2	1	2.7	14.1
178. St. Cloud, Minn.	2	2	1	2.7	11.8
179. Quincy, Ill.	3	1	4	2.8	13.4
180. Santa Rosa, Calif.	3	2	0	2.9	19.4
181. Norman, Okla.	2	0	2	2.9	12.0
182. Torrington, Conn.	2	1	0	2.9	13.3
183. Watertown, Mass.	2	0	0	3.1	10.2
184. Chicago Heights, Ill.	**3**	**5**	**0**	**3.2**	**17.5**
185. Eau Claire, Wis.	3	0	2	3.2	15.8
186. Granite City, Ill.	3	0	2	3.3	15.0
187. Lewiston, Maine	2	1	1	3.3	9.8
188. Elkhart, Ind.	4	2	0	3.4	19.9
189. Superior, Wis.	**2**	**4**	**2**	**3.4**	**11.9**
190. Fremont, Calif.	3	2	3	3.4	13.7
191. Spartanburg, S. C.	4	3	5	3.5	18.0
192. Maple Heights, Ohio	2	0	0	3.5	12.6
193. Stratford, Conn.	3	0	1	3.5	13.5
194. Newburgh, N. Y.	3	1	0	3.5	19.4
195. Burlington, N. C.	3	1	0	3.5	18.1
196. Bristol, Conn.	3	2	0	4.1	13.2
197. Kearny, N. J.	3	0	1	4.2	16.0
198. Groton, Conn.	2	0	1	4.6	13.4
199. Hamden, Conn.	3	1	1	4.9	14.6
200. Elgin, Ill.	6	3	2	4.9	24.3
201. Orange, Calif.	4	0	1	4.9	30.3
202. Attleboro, Mass.	2	1	4	5.0	14.8
203. Southgate, Mich.	3	3	0	5.1	20.4
204. Petersburg, Va.	4	2	0	5.7	21.7
205. Wyandotte, Mich.	5	2	0	5.7	23.0
206. Vineland, N. J.	5	4	3	6.0	26.5
207. Moline, Ill.	7	2	2	6.8	32.8
208. Calumet City, Ill.	5	0	5	10.3	40.0
209. Oceanside, Calif.	6	1	2	10.9	48.0
210. Southfield, Mich.	9	5	2	13.5	57.1

Group IX (10,000 to 25,000)

1. Medford, Ore.	0	0	1	0.0	0.0
2. Pampa, Tex.	**0**	**1**	**0**	**0.0**	**0.0**
3. Covina, Calif.	0	0	0	0.0	0.0
4. Lake Worth, Fla.	0	0	1	0.0	0.0
5. La Porte, Ind.	0	0	0	0.0	0.0
6. Sumter, S. C.	**0**	**2**	**1**	**0.0**	**0.0**
7. Manhattan, Kan.	**0**	**1**	**0**	**0.0**	**0.0**
8. Ypsilanti, Mich.	0	0	0	0.0	0.0
9. Pittsburg, Calif.	0	0	0	0.0	0.0
10. Lombard, Ill.	0	0	0	0.0	0.0
11. Xenia, Ohio	0	0	1	0.0	0.0
12. Plainview, Tex.	0	0	2	0.0	0.0
13. Tiffin, Ohio	0	0	0	0.0	0.0
14. Monterey, Calif.	**0**	**2**	**0**	**0.0**	**0.0**
15. Richland, Wash.	0	0	0	0.0	0.0
16. Columbia Hts., Minn.	**0**	**2**	**0**	**0.0**	**0.0**
17. Cedar Falls, Iowa	**0**	**3**	**0**	**0.0**	**0.0**
18. Lufkin, Tex.	**0**	**1**	**1**	**0.0**	**0.0**
19. Ottawa, Ill.	**0**	**1**	**1**	**0.0**	**0.0**
20. Frederick, Md.	0	0	0	0.0	0.0
21. Cape Girardeau, Mo.	**0**	**1**	**0**	**0.0**	**0.0**
22. So. Portland, Maine	**0**	**1**	**0**	**0.0**	**0.0**
23. Texarkana, Ark.	**0**	**1**	**1**	**0.0**	**0.0**
24. Brownwood, Tex.	**0**	**1**	**2**	**0.0**	**0.0**
25. Pittsburg, Kan.	0	0	0	0.0	0.0
26. Whitefish Bay, Wis.	0	0	0	0.0	0.0
27. Albert Lea, Minn.	0	0	1	0.0	0.0
28. Corsicana, Tex.	**0**	**1**	**1**	**0.0**	**0.0**
29. Moorhead, Minn.	0	0	1	0.0	0.0
30. Hibbing, Minn.	0	0	0	0.0	0.0
31. Chico, Calif.	**0**	**1**	**0**	**0.0**	**0.0**
32. East Haven, Conn.	**0**	**1**	**0**	**0.0**	**0.0**
33. Coffeyville, Kan.	**0**	**1**	**0**	**0.0**	**0.0**
34. Ada, Okla.	**0**	**1**	**0**	**0.0**	**0.0**
35. Evergreen Park, Ill.	0	0	0	0.0	0.0
36. Johnson City, N. Y.	0	0	0	0.0	0.0
37. Huntington, Ind.	0	0	0	0.0	0.0
38. Stillwater, Okla.	**0**	**1**	**0**	**0.0**	**0.0**
39. Wooster, Ohio	0	0	2	0.0	0.0
40. Streator, Ill.	0	0	0	0.0	0.0
41. Villa Park, Ill.	0	0	0	0.0	0.0
42. Hillside, N. J.	**0**	**1**	**0**	**0.0**	**0.0**
43. Berkley, Mich.	**0**	**1**	**2**	**0.0**	**0.0**
44. Caldwell, Idaho	**0**	**1**	**2**	**0.0**	**0.0**
45. Kennewick, Wash.	0	0	4	0.0	0.0
46. Woodland, Calif.	**0**	**1**	**1**	**0.0**	**0.0**
47. Shorewood, Wis.	0	0	0	0.0	0.0
48. Livermore, Calif.	**0**	**1**	**0**	**0.0**	**0.0**
49. Antioch, Calif.	**0**	**1**	**0**	**0.0**	**0.0**
50. Sterling, Ill.	**0**	**1**	**1**	**0.0**	**0.0**
51. Pasco, Wash.	0	0	1	0.0	0.0
52. Stevens Point, Wis.	**0**	**1**	**0**	**0.0**	**0.0**
53. Meadville, Pa.	**0**	**1**	**0**	**0.0**	**0.0**
54. Newton, Kan.	**0**	**1**	**0**	**0.0**	**0.0**
55. Collingswood, N. J.	**0**	**1**	**1**	**0.0**	**0.0**

	Six Months 1961	1960	1959	1961 Reg. Rate	1961 Pop. Rate
56. La Grange, Ill.	**0**	**1**	**0**	**0.0**	**0.0**
57. McAlester, Okla.	0	0	1	0.0	0.0
58. Brookfield, Ill.	0	0	0	0.0	0.0
59. Pendleton, Ore.	0	0	1	0.0	0.0
60. Morton Grove, Ill.	0	0	0	0.0	0.0
61. Bristol, Va.	**0**	**2**	**0**	**0.0**	**0.0**
62. Lexington, N. C.	**0**	**1**	**0**	**0.0**	**0.0**
63. Defiance, Ohio	0	0	0	0.0	0.0
64. Owatonna, Minn.	0	0	0	0.0	0.0
65. Rocky River, Ohio	0	0	0	0.0	0.0
66. Prescott, Ariz.	0	0	0	0.0	0.0
67. Goshen, Ind.	**0**	**2**	**1**	**0.0**	**0.0**
68. Lamesa, Tex.	0	0	1	0.0	0.0
69. New Bern, N. C.	**0**	**1**	**1**	**0.0**	**0.0**
70. Port Angeles, Wash.	**0**	**1**	**0**	**0.0**	**0.0**
71. Boone, Iowa	0	0	1	0.0	0.0
72. Wisconsin Rpds., Wis.	0	0	0	0.0	0.0
73. Brainerd, Minn.	0	0	1	0.0	0.0
74. Wethersfield, Conn.	**0**	**1**	**0**	**0.0**	**0.0**
75. Logan, Utah	**0**	**1**	**0**	**0.0**	**0.0**
76. Junction City, Kan.	0	0	0	0.0	0.0
77. Fergus Falls, Minn.	0	0	0	0.0	0.0
78. Hays, Kan.	**0**	**4**	**0**	**0.0**	**0.0**
79. Auburn, Wash.	0	0	0	0.0	0.0
80. Hawthorne, N. J.	0	0	0	0.0	0.0
81. La Grange Park, Ill.	0	0	0	0.0	0.0
82. Tracy, Calif.	0	0	0	0.0	0.0
83. Massena, N. Y.	0	0	0	0.0	0.0
84. Waynesboro, Va.	0	0	0	0.0	0.0
85. North Adams, Mass.	0	0	1	0.0	0.0
86. West Lafayette, Ind.	**0**	**2**	**3**	**0.0**	**0.0**
87. State College, Pa.	0	0	0	0.0	0.0
88. Mamaroneck, N. Y.	0	0	1	0.0	0.0
89. Warren, Pa.	0	0	0	0.0	0.0
90. Watertown, Wis.	**0**	**1**	**0**	**0.0**	**0.0**
91. Naugatuck, Conn.	**0**	**2**	**3**	**0.0**	**0.0**
92. Reidsville, N. C.	**0**	**5**	**0**	**0.0**	**0.0**
93. Grosse Pt. Wds., Mich.	0	0	0	0.0	0.0
94. Winfield, Kan.	0	0	0	0.0	0.0
95. Moses Lake, Wash.	0	0	0	0.0	0.0
96. Marshfield, Wis.	**0**	**1**	**0**	**0.0**	**0.0**
97. Galion, Ohio	0	0	0	0.0	0.0
98. Kenmore, N. Y.	0	0	0	0.0	0.0
99. Winnetka, Ill.	0	0	1	0.0	0.0
100. Gardner, Mass.	**0**	**1**	**0**	**0.0**	**0.0**
101. Atchison, Kan.	**0**	**1**	**0**	**0.0**	**0.0**
102. Beaver Dam, Wis.	0	0	0	0.0	0.0
103. Hanford, Calif.	**0**	**1**	**0**	**0.0**	**0.0**
104. Ansonia, Conn.	**0**	**1**	**1**	**0.0**	**0.0**
105. South Orange, N. J.	0	0	1	0.0	0.0
106. Mitchell, S. D.	0	0	0	0.0	0.0
107. St. Joseph, Mich.	**0**	**1**	**0**	**0.0**	**0.0**
108. Albion, Mich.	0	0	0	0.0	0.0
109. Bay Village, Ohio	0	0	0	0.0	0.0
110. Los Alamos, N. M.	0	0	2	0.0	0.0
111. Northbrook, Ill.	0	0	0	0.0	0.0
112. Dover, Ohio	**0**	**2**	**0**	**0.0**	**0.0**
113. Bellefontaine, Ohio	0	0	0	0.0	0.0
114. Van Wert, Ohio	0	0	0	0.0	0.0
115. Martinsburg, W. Va.	0	0	0	0.0	0.0
116. Mansfield, Conn.	0	0	1	0.0	0.0
117. Fairfield, Calif.	0	0	0	0.0	0.0
118. Cudahy, Wis.	0	0	0	0.0	0.0
119. Windsor, Conn.	0	0	2	0.0	0.0
120. Pacific Grove, Calif.	0	0	0	0.0	0.0
121. Red Wing, Minn.	0	0	0	0.0	0.0
122. Willowick, Ohio	0	0	1	0.0	0.0
123. Marion, Iowa	0	0	0	0.0	0.0
124. Grosse Pte. Pk., Mich.	0	0	0	0.0	0.0
125. Suffolk, Va.	0	0	0	0.0	0.0
126. Dyersburg, Tenn.	0	0	2	0.0	0.0
127. Central Falls, R. I.	**0**	**1**	**0**	**0.0**	**0.0**
128. Charles City, Iowa	0	0	0	0.0	0.0
129. Conneaut, Ohio	0	0	1	0.0	0.0
130. Rock Springs, Wyo.	**0**	**1**	**0**	**0.0**	**0.0**
131. Hornell, N. Y.	0	0	0	0.0	0.0
132. Bemidji, Minn.	0	0	2	0.0	0.0
133. River Forest, Ill.	**0**	**1**	**1**	**0.0**	**0.0**
134. Vacaville, Calif.	0	0	0	0.0	0.0
135. Moscow, Idaho	0	0	0	0.0	0.0
136. Monmouth, Ill.	0	0	0	0.0	0.0
137. Brigham City, Utah	0	0	0	0.0	0.0
138. Monroe, N. C.	0	0	1	0.0	0.0
139. University Hts., Ohio	0	0	1	0.0	0.0
140. Sulphur, La.	0	0	1	0.0	0.0
141. Fort Thomas, Ky.	0	2	0	0.0	0.0
142. Menominee, Mich.	0	0	0	0.0	0.0
143. Bel'font'ne Nbrs., Mo.	0	0	0	0.0	0.0
144. Stoughton, Mass.	**0**	**1**	**0**	**0.0**	**0.0**
145. Covington, Va.	0	0	0	0.0	0.0
146. Lake Forest, Ill.	0	0	0	0.0	0.0
147. Ironwood, Mich.	0	0	0	0.0	0.0
148. Auburn, Mass.	**0**	**1**	**0**	**0.0**	**0.0**
149. Winchester, Conn.	0	0	1	0.0	0.0
150. Weslaco, Tex.	**0**	**1**	**0**	**0.0**	**0.0**
151. Hurst, Tex.	0	0	1	0.0	0.0
152. Riverdale, Ill.	**0**	**1**	**0**	**0.0**	**0.0**
153. Beacon, N. Y.	**0**	**1**	**0**	**0.0**	**0.0**
154. La Salle, Ill.	**0**	**1**	**0**	**0.0**	**0.0**
155. Webster, Mass.	0	0	0	0.0	0.0
156. Ridgefield Park, N. J.	**0**	**1**	**0**	**0.0**	**0.0**
157. Brooklyn, Ohio	0	0	2	0.0	0.0
158. Derby, Conn.	**0**	**3**	**0**	**0.0**	**0.0**
159. Killingly, Conn.	0	0	1	0.0	0.0
160. Mercedes, Tex.	0	0	0	0.0	0.0
161. Donora, Pa.	0	0	0	0.0	0.0
162. Rolling Meadows, Ill.	0	0	0	0.0	0.0
163. Yuma, Ariz.	**1**	**4**	**0**	**1.3**	**8.3**
164. Ponca City, Okla.	1	1	0	1.3	8.2
165. Lodi, Calif.	1	0	0	1.3	9.0
166. Longview, Wash.	1	0	1	1.4	8.6
167. Los Altos, Calif.	1	0	2	1.5	10.2
168. Bell, Calif.	**1**	**3**	**1**	**1.5**	**10.3**
169. Glendora, Calif.	1	0	3	1.5	9.6
All cities in this group				1.5	7.6
170. Florence, S. C.	1	1	3	1.6	8.1
171. New Kensington, Pa.	1	0	2	1.7	8.5
172. South St. Paul, Minn.	1	0	0	1.7	9.1
173. Corvallis, Ore.	1	0	0	1.7	9.7
174. Klammath Falls, Ore.	1	0	0	1.7	11.8
175. Adrian, Mich.	1	1	0	1.8	9.9
176. Winona, Minn.	1	0	0	1.8	8.0
177. Borger, Tex.	1	1	3	1.8	9.6
178. Sedalia, Mo.	1	1	1	1.8	8.4
179. Robbinsdale, Minn.	1	0	0	1.8	12.2
180. San Fernando, Calif.	1	0	2	1.9	12.4
181. Denison, Tex.	1	1	2	1.9	8.8
182. Butler, Pa.	1	0	0	1.9	9.5
183. Endicott, N. Y.	1	0	0	1.9	10.6

TRAFFIC DEATHS—STATE RECORDS

Deaths are reported by state traffic authorities.

All figures are preliminary. To insure proper comparisons, 1960 and 1959 figures cover the same reporting period as those for 1961.

Population Rate: U. S. population rate is the estimated annual number of deaths per 100,000 population, assuming that deaths for the rest of the year will follow the normal seasonal pattern. State population rate is the estimated annual number of deaths per 100,000 population, assuming that the monthly average of deaths will remain at the present average for the rest of the year. U. S. population rate is based on July 1, 1961 population estimate; state population rates are based on July 1, 1960 population estimates, U. S. Bureau of the Census, Washington, D. C.

States shown in heavy type have improved in 1961 compared with 1960, or showed no change.

Mileage Rate: The number of deaths per 100 million vehicle miles of travel.

(Figures in parenthesis following the 1961 mileage rate indicate the number of months for which the mileage rate is calculated for each state.)

	Months Reported	Deaths Identical Periods 1961	1960	1959	% Change 1960 to 1961	1959 to 1961	1961 Pop. Rate	1961 Mile. Rate	
TOTAL U.S.	6	16,980	17,170	17,121	— 1%	— 1%	20.7	4.8	(6)
Ala.	6	398	400	401	— 1%	— 1%	24.3	6.5	(4)
Alaska	6	8	16	8	— 50%	0%	7.0	—	—
Ariz.	6	224	226	277	— 1%	— 19%	34.0	7.0	(5)
Ark.	6	200	178	208	+ 12%	— 4%	22.4	5.7	(5)
Calif.	6	1,769	1,714	1,667	+ 3%	+ 6%	22.3	5.1	(4)
Colo.	6	199	188	177	+ 6%	+ 12%	22.6	4.5	(1)
Conn.	6	119	101	118	+ 18%	+ 1%	9.3	2.4	(4)
Del.	6	22	35	35	— 37%	— 37%	**9.8**	**1.9**	(5)
D. of C.	6	18	43	33	— 35%	— 15%	4.7	0.8	(3)
Fla.	6	567	614	532	— 8%	+ 6%	**22.7**	**5.6**	(5)
Ga.	6	428	466	451	— 8%	— 5%	**21.7**	**5.0**	(4)
Hawaii	6	44	51	44	— 14%	0%	13.7	—	—
Idaho	6	95	105	101	— 10%	— 6%	**28.3**	**6.1**	(4)
Ill.	6	819	726	774	+ 13%	+ 6%	16.2	4.1	(4)
Ind.	6	469	484	473	— 3%	— 1%	**20.1**	**4.7**	(5)
Ia.	6	289	246	307	+ 17%	— 6%	20.9	4.9	(4)
Kan.	6	268	232	259	+ 16%	+ 3%	24.6	4.6	(4)
Ky.	6	312	340	350	— 8%	— 11%	**20.5**	**5.8**	(4)
La.	6	339	405	309	— 16%	+ 10%	**20.7**	**6.5**	(4)
Me.	6	66	60	62	+ 10%	+ 6%	13.6	3.4	(4)
Md.	6	199	269	250	— 26%	— 20%	**12.8**	**3.2**	(4)
Mass.	6	238	255	242	— 7%	— 2%	**9.2**	**2.8**	(4)
Mich.	6	673	626	575	+ 8%	+ 17%	17.2	4.5	(5)
Minn.	6	301	274	273	+ 10%	+ 10%	17.6	4.0	(5)
Miss.	6	253	308	239	— 18%	+ 6%	**23.2**	**7.0**	(4)
Mo.	6	414	451	401	— 8%	+ 3%	**19.1**	**5.0**	(4)
Mont.	6	130	84	102	+ 55%	+ 27%	38.3	7.2	(4)
Neb.	6	146	112	146	+ 30%	0%	20.7	4.5	(5)
Nev.	6	102	71	77	+ 44%	+ 32%	70.8	9.5	(3)
N. H.	6	32	42	61	— 24%	— 48%	**10.5**	**2.6**	(3)
N. J.	6	349	354	332	— 1%	+ 5%	**11.4**	**2.7**	(5)
N. M.	6	154	188	220	— 18%	— 30%	**32.2**	**5.9**	(4)
N. Y.	6	872	866	955	+ 1%	— 9%	10.4	3.9	(5)
N. C.	6	519	546	544	— 4%	— 5%	**22.7**	**5.6**	(4)
N. D.	6	51	69	83	— 26%	— 39%	**16.1**	—	—
Ohio	6	669	859	753	— 22%	— 11%	**13.7**	**3.6**	(4)
Okla.	6	303	288	300	+ 5%	+ 1%	26.0	5.2	(4)
Ore.	6	222	168	202	+ 32%	+ 10%	25.0	5.1	(5)
Pa.	5	507	617	621	— 18%	— 18%	**10.7**	**3.1**	(4)
R. I.	6	37	26	37	+ 42%	0%	8.6	2.6	(5)
S. C.	6	319	338	289	— 6%	+ 10%	**26.7**	**6.5**	(4)
S. D.	6	85	91	92	— 7%	— 8%	**24.9**	**6.1**	(5)
Tenn.	6	339	356	326	— 5%	+ 4%	**19.0**	**4.8**	(4)
Texas	6	1,087	1,010	1,097	+ 8%	— 1%	22.6	4.2	(4)
Utah	6	96	109	84	— 12%	+ 14%	**21.4**	**4.2**	(3)
Vt.	6	29	33	42	— 12%	— 31%	**14.8**	**3.3**	(5)
Va.	6	368	352	372	+ 5%	— 1%	18.5	4.5	(5)
Wash.	6	225	238	235	— 5%	— 4%	**15.7**	**4.1**	(5)
W. Va.	6	156	152	203	+ 3%	— 23%	16.8	5.6	(4)
Wis.	6	395	347	351	+ 14%	+ 13%	19.9	5.4	(4)
Wyo.	6	72	68	59	+ 6%	+ 22%	43.4	7.3	(4)
P. R.‡	6	143	187	122	— 24%	+ 17%	12.2	11.8	(5)
V. I.†	3	0	3	2	—100+	—100+	0.0	—	—
CANADIAN PROVINCES									
Alta.	5	83	87	77	— 5%	+ 8%	17.2	—	—
B. C.	4	102	75	69	— 36%	+ 48%	**20.6**	—	—
Man.	2	10	8	13	+ 25%	— 23%	7.0	—	—
Ont.	5	415	328	358	+ 27%	+..16%	21.7	—	—
Sask.	5	52	34	28	+ 53%	+ 86%	14.2	—	—

‡Commonwealth of Puerto Rico
†Virgin Islands

	Six Months 1961	1960	1959	1961 Reg. Pop. Rate	1961 Pop. Rate
184. Westport, Conn.	1	0	3	1.9	9.5
185. Muskegon Hts., Mich.	1	0	1	2.0	10.2
186. Statesville, N. C.	1	0	0	2.0	10.1
187. Glenview, Ill.	1	0	0	2.0	11.0
188. Ashland, Ohio	1	0	0	2.1	11.5
189. Elmwood Park, Ill.	1	0	0	2.1	8.4
190. Marietta, Ohio	1	0	0	2.1	11.9
191. Connersville, Ind.	1	0	1	2.1	11.3
192. Tulare, Calif.	**1**	**2**	**1**	**2.2**	**14.5**
193. Greenville Tex.	1	1	1	2.2	10.5
194. Morristown, N. J.	1	1	0	2.2	11.3
195. Oswego, N. Y.	1	1	0	2.2	9.0
196. Martinsville, Va.	1	0	4	2.2	10.6
197. Valparaiso, Ind.	1	0	0	2.2	13.2
198. Redding, Calif.	1	0	0	2.3	15.6
199. Fostoria, Ohio	1	0	0	2.4	12.7
200. Arkansas City, Kan.	1	0	1	2.4	14.0
201. Faribault, Minn.	1	0	0	2.4	11.8
202. Alpena, Mich.	1	0	2	2.4	13.6
203. East Moline, Ill.	1	1	1	2.4	12.0
204. Norfolk, Neb.	1	1	0	2.5	15.3
205. Mt. Vernon, Ill.	1	0	0	2.6	12.8
206. Shelton, Conn.	1	0	0	2.7	11.0
207. Vernon, Tex.	1	1	1	2.7	16.5
208. Darien, Conn.	**1**	**4**	**2**	**2.7**	**10.9**
209. Windham, Conn.	**1**	**2**	**0**	**2.7**	**11.8**
210. Fort Myers, Fla.	2	1	1	2.8	17.8
211. Elizabeth City, N. C.	1	0	1	2.8	14.2
212. Millbrae, Calif.	1	1	0	2.8	12.6
213. Brawley, Calif.	**1**	**3**	**0**	**2.8**	**15.7**
214. Hopewell, Va.	1	0	0	2.9	11.2
215. Merced, Calif.	2	0	2	3.0	19.9
216. Menasha, Wis.	1	0	0	3.0	13.7
217. North Olmsted, Ohio	1	0	0	3.0	12.3
218. Monroe, Mich.	**2**	**4**	**0**	**3.1**	**17.4**
219. Bowling Green, Ohio	1	0	0	3.1	14.7
220. Highland Park, Tex.	1	1	0	3.2	19.2
221. Homewood, Ala.	**1**	**2**	**1**	**3.3**	**9.7**
222. Cambridge, Md.	1	0	0	3.3	16.4
223. Warrensville Hts., O.	1	1	0	3.4	18.9
224. Wheaton, Ill.	2	1	0	3.4	16.5
225. Marinette, Wis.	1	0	2	3.5	15.0
226. River Rouge, Mich.	1	1	2	3.5	11.0
227. Cadillac, Mich.	1	0	0	3.5	19.8
228. Great Bend, Kan.	0	0	0	3.6	24.0
229. Jeffersonville, Ind.	2	0	1	3.6	20.5
230. Two Rivers, Wis.	1	1	1	3.6	16.1
231. Griffin, Ga.	2	2	0	3.6	18.4
232. Ecorse, Mich.	**1**	**2**	**0**	**3.6**	**11.6**
233. Du Bois, Pa.	1	0	1	3.7	18.7
234. Houma, La.	2	0	0	3.7	17.7
235. Aberdeen, S. D.	2	1	1	3.8	17.3
236. Brentwood, Mo.	1	0	0	3.8	16.3
237. Maumee, Ohio	1	0	0	3.8	16.5
238. Muscatine, Iowa	2	0	0	3.8	19.0
239. Glastonbury, Conn.	1	0	0	3.8	13.8
240. Colton, Calif.	2	1	0	3.8	21.4
241. Traverse City, Mich.	2	0	0	3.9	21.7
242. Pompano Beach, Fla.	**2**	**3**	**0**	**3.9**	**25.0**
243. Jennings, La.	1	0	1	4.0	16.8
244. W. Springfield, Mass.	2	2	3	4.0	16.1
245. Napa, Calif.	3	1	0	4.0	27.0
246. Tempe, Ariz.	2	0	2	4.1	16.1
247. Walla Walla, Wash.	3	0	0	4.2	24.5
248. Augusta, Maine	2	1	1	4.2	18.4
249. Western Springs, Ill.	1	0	0	4.3	18.5
250. Holland, Mich.	3	1	0	4.3	24.2
251. Uniontown, Pa.	2	0	0	4.4	22.3
252. Watertown, Conn.	1	0	1	4.7	13.5
253. Peru, Ind.	2	1	3	4.7	27.6
254. Stonington Conn.	1	0	1	4.9	14.3
255. Santa Paula, Calif.	2	1	0	5.0	30.1
256. Amherst, Mass.	1	0	0	5.1	14.6
257. Niles, Mich.	2	0	1	5.2	29.0
258. Canton, Ill.	2	0	1	5.3	29.4
259. Astoria, Ore.	2	0	0	5.6	35.7
260. Farmington, Conn.	**1**	**3**	**2**	**5.8**	**18.5**
261. Escanaba, Mich.	2	2	0	5.8	26.0
262. Branford, Conn.	2	0	0	5.9	24.1
263. Albany, Calif.	2	0	1	6.0	27.0
264. Coronado, Calif.	2	1	2	6.0	22.2
265. Southington, Conn.	2	2	0	6.1	17.5
266. Henderson, N. C.	2	0	0	6.2	31.5
267. Virginia, Minn.	2	0	0	6.6	28.6
268. Westlake, Ohio	2	1	1	7.0	31.0
269. Bellevue, Wash.	3	0	0	7.3	46.9
270. Salisbury, N. C.	4	0	0	7.4	37.6
271. Marquette, Mich.	3	0	0	7.4	30.3
272. Bedford, Ind.	3	1	0	7.9	46.2
273. North Chicago, Ill.	**2**	**3**	**0**	**7.9**	**19.5**
274. Bellaire, Ohio	2	0	0	8.2	34.8
275. Vernon, Conn.	3	0	0	8.3	35.3
276. New Canaan, Conn.	4	0	0	11.5	59.3
277. Owosso, Mich.	8	1	0	16.8	94.1
CANADIAN CITIES					
Hamilton, Ont.	9	13	10	—	6.8
Toronto, Ont.	59	47	36	—	7.7
Montreal, Que.	59	53	53	—	10.6
Vancouver, B. C.	22	17	13	—	11.0
London, Ont.	10	3	5	—	12.3

MOTOR VEHICLE DEATHS AND INJURIES BY STATES 1961 and 1960

Thirty-nine states and the District of Columbia have reported their death and injury experience for one to five months of 1961.

The table below shows all of the injury data reported by each state, but little information is available on precisely what injuries are included in each state's tabulation.

Differences in the ratio of injuries to deaths probably reflect primarily differences in the extent to which all injuries are reported. Other factors are undoubtedly involved, such as: (1) a few states omit some or all of the injuries in urban accidents; (2) there are large differences between states in the proportion of travel which is in urban area (the injury-death ratio for urban accidents is about four times the ratio for rural accidents).

The question of what injuries are being reported applies with equal force to the per cent change in injuries from 1960 to 1961. Any tightening up of police administration, any emphasis on "get all the injuries" is almost certain to bring about an increase in reported injuries, but probably only in minor ones. Similarly, instructions to "skip the scratches" probably would result in a decrease in recorded cases in many states. Introduction of financial responsibility laws has been observed to increase reported injuries sharply. Even the public's increased claims-consciousness is regarded by many people as an element in the growing number of injuries reported. With such factors operating to destroy comparability, indicated changes in the number of injuries should not be considered as reliable.

Months Reported	Deaths†† 1961	1960	Injuries†† 1961	1960	% Change 1960 to 1961 Deaths	Injuries	1961 Ratio of Injuries to Deaths
TOTAL U.S. **	9,352#	9,575#	419,641	406,075	— 2#	+ 3	45
Ala. 5	325	294	1,752†	1,843†	+ 11	— 5	5
Ariz. 3	99	112	3,529	2,822	— 12	+ 25	36
Ark. 5	170	147	2,052	1,348	+ 16	+ 52	12
Calif. 4	1,173	1,079	50,385	47,165	+ 9	+ 7	43
Colo.							
Conn. 1	12	15	2,331	1,768	— 20	+ 32	194
Del. 5	18	27	1,094	985	— 33	+ 11	61
D. of C. 4	9	29	2,224	2,433	— 69	— 9	247
Fla. 5	497	527	20,880	19,873	— 6	+ 5	42
Ga. 5	341	393	6,954	7,372	— 13	— 6	20
Idaho 4	56	55	1,626	1,227	+ 2	+ 33	29
Ill. 4	520	435	33,899	28,000	+ 20	+ 21	65
Ind. 4	292	299	11,399	10,539	— 2	+ 8	39
Ia.							
Kan.							
Ky. 5	243	273	6,069	5,702	— 11	+ 6	25
La. 5	263	322	3,012†	3,157†	— 18	— 5	11
Me. 5	47	51	2,360	2,369	— 8	— *	50
Md. 3	78	117	4,986	5,007	— 33	— *	64
Mass. 3	105	106	26,993	25,107	— 1	+ 8	257
Mich. 5	556	501	32,994	32,984	+ 11	+ *	59
Minn. 5	238	220	12,716	10,737	+ 8	+ 18	53
Miss. 4	172	204	2,474	2,376	— 16	+ 4	14
Mo. 5	349	373	4,667	4,555	— 6	+ 2	13
Mont. 4	68	44	1,102	1,057	+ 55	+ 4	16
Neb. 5	120	92	4,294	4,158	+ 30	+ 3	36
Nev.							
N. H. 5	23	29	2,626	2,228	— 21	+ 18	114
N. J.							
N. M. 4	97	129	1,947	1,809	— 25	+ 8	20
N. Y. 3	363	385	57,003	60,830	— 6	— 6	157
N. C. 4	328	338	8,826	7,869	— 3	+ 12	27
N. D. 1	9	5	133	124	+ 80	+ 7	15
Ohio 5	544	708	29,734	31,813	— 23	— 7	55
Okla.							
Ore. 5	171	135	7,211	6,517	+ 27	+ 11	42
Pa. 3	280	325	15,958	20,324	— 14	— 21	57
R. I.							
S. C. 5	249	276	5,821	4,822	— 10	+ 21	23
S. D. 4	47	43	803	958	+ 9	— 16	17
Tenn. 5	284	303	8,643	7,908	— 6	+ 9	30
Texas 5	855	830	24,075	23,215	+ 3	+ 4	28
Utah 4	52	62	2,625	2,564	— 16	+ 2	50
Vt. 5	19	31	1,131	955	— 39	+ 18	60
Va.							
Wash. 4	149	153	10,410	8,952	— 3	+ 16	70
W. Va. 3	73	60	1,746	1,574	+ 22	+ 11	24
Wis.							
Wyo. 5	58	48	1,157	1,029	+ 21	+ 12	20
P. R.‡ 3	72	82	3,014	3,129	— 12	— 4	42
V. I.¶ 3	0	3	44	55	—100	— 20	¶¶

†Rural injuries only.

††All figures are preliminary. To insure proper comparisons, 1960 figures cover the same reporting period as those for 1961.

*Less than .5%.

**Death and injury totals cover reports for all months indicated in this column.

#Death totals and changes differ from national figures because those shown here are based on the states and months for which injury data are reported.

‡Commonwealth of Puerto Rico.

¶Virgin Islands.

¶¶Ratio cannot be calculated due to 0 in 1961 death total.

Safety Library

From Page 4

Highway Highlights. May, 1961, p14-17. (Students from 22 nations in driver education course at Michigan State.)

Economics

Accident Costs. Karl Schulze. *Commercial Car Journal.* June, 1961, p98-99.

Economic Cost of Motor Vehicle Accidents, Utah Commercial Vehicles, 1957. Vol. I, 1960. 315pp. Tables. Utah State Department of Highways, Salt Lake City 14, Utah.

What Price Safety? A. S. "Mike" Monroney. *American Road Builder.* May, 1961, p8-9.

Enforcement

Working Their Way Out Of Trouble. Norma Lee Browning. *Saturday Evening Post.* May 13, 1961, p30-31, 64, 68, 70.

Engineering

Yale Illuminates the Nation's Traffic Lights. *Engineering News-Record.* June 6, 1961, p30-32, 34.

Exhaust gas

Air Pollution Foundation. Final Report, 1961. 62pp. Foundation, 2556 Mission st., San Marino, Calif.

Inventor Of Gasoline Manufacturing Process Pulls a Switch; Works To Cut Auto Exhaust. *Highway Traffic.* May, 1961, p8.

Glass

Do You Have the Safety Glass You Paid For? Paul W. Kearney. *Popular Mechanics.* July, 1961, p65-70, 228, 230.

Highways

Automated Interstate? *Engineering News-Record.* June 15, 1961, p24.

Federal-Aid Highway After Five Years: Progress and Promise. ENR road report; 1. Interstate; 2. Benefits; 3. Engineering; 4. Equipment; 5. Materials. *Engineering News-Record.* June 22, 1961, p60-74.

Urban Highway Planning Legislation And Its Application In North Carolina. Billy Rose. *Traffic Engineering.* June 1961, p11-13, 42.

Inspection

Inspected Cars Mean Safer Highways. Siler Freeman. *Look.* May 23, 1961, p94, 96, 98.

Legislation

Digest of Motor Laws. 1961. 168pp. American Automobile Association, Washington 6, D. C.

Safety Council Lauds Roberts' Crusade. *Automotive News.* June 26, 1961, p8.

Litterbugs

War On Litterbugs. M. C. Clarkson. *Better Roads.* May, 1961, p19-20, 33.

Miniature cars

Karting: The Kid Sport That Kills. *Good Housekeeping.* June, 1961, p121-123.

Parking

From Freeway To Parking Space. *Engineering News-Record.* June 15, 1961, p32.

Pedestrians

Editorially Speaking. *The New Outlook.* May, 1961, p181-182. (Use of white cane by blind pedestrians.)

Pedestrian Violations. *Traffic Digest and Review.* June, 1961, p10-15, 26-31.

Some Thoughts On White Cane Philosophy And Problems. Carl T. Rodgers & Arthur L. Voorhees. *The New Outlook.* May, 1961, p173-177.

Planning

Manitoba Highways, Planning For Tomorrow: An Engineering Study of Long Range Needs On the Provincial Trunk Highway System. 1960. 50pp. Illus. charts, maps, tables. Manitoba Department of Public Works, Winnipeg, Manitoba, Canada.

Programs

Sing a Song For Detroit. *Journal of American Insurance.* July, 1961, p27-29.

Racing

Drag Racing and Traffic Safety. Clay Hess. *The California Highway Patrolman.* June, 1961, p17, 144.

Radio

C.T.A. Pioneers Trainphone System. *Metropolitan Transportation.* June, 1961, p49-50.

Keeping the Driver Informed. Robert V. Hudson. *Traffic Digest and Review.* June, 1961, p6-8, 31.

School buses

School Bus Driver Manual. 1961. 24pp. State Department of Public Instruction, Helena, Mont.

Signals

New Safety Signal System: To Boost Daytime Visibility. *Automotive News.* July 3, 1961, p8.

Speed

Traffic Operation Speed Studies. May, 1961. 40pp. Charts, maps. Arizona Highway Department, Traffic Engineering Division, Phoenix, Ariz.

Subways

Tubes For Our Traffic Troubles. *Journal of American Insurance.* July, 1961, p13-15.

Tires

Rubber and Tire Friction. H. W. Kummer and W. E. Meyer. 1960. 95pp, illus., charts. The Pennsylvania State University, College of Engineering and Architecture, University Park, Penn. (Engineering Research Bulletin B-80.) Price $3.00.

Traffic

The Traffic Accident Epidemic. Reprinted from *New York Herald Tribune,* Mar. 6-15, 1961 unpaged. Dan Ross, New York Herald Tribune, 230 West 41st, New York 36, N. Y.

Traffic control

Built-In Brains For Our Highways. *Journal of American Insurance.* May, 1961, p1-4.

Toward More Uniform Traffic Controls. April, 1961, p1-8. Automotive Safety Foundation, 200 Ring Building, Washington 6, D. C. (ASF Report No. 10.)

Transit

San Francisco Plans the World's Most Modern Rapid-Transit System. *The American City.* July, 1961, p123, 125.

Simulators

Driving Simulators Aid in Road Design. *Engineering News-Record.* May 18, 1961, p103.

Realistic Make-Believe: Complex New Research Simulator Expected To Give Information On Many Highway Problems. Duane Crank. *Highway Highlights.* May, 1961, p6-7.

U.C.L.A.'s Sophisticated Simulator. *Engineering News-Record.* May 18, 1961, p103-104.

ADDRESSES OF MAGAZINES MENTIONED

The American City
470 Fourth Ave.
New York 16, N. Y.

The American Road Builder
World Center Building
918—16th St., N. W.
Washington 6, D. C.

American Youth
3-135 General Motors Bldg.
Detroit 2, Mich.

Automotive News
2666 Penobscot Bldg.
Detroit 26, Mich.

Better Roads
173 W. Madison St.
Chicago, Ill.

California Highway Patrolman
1213 H St.
Sacramento 3, Calif.

Commercial Car Journal
Chestnut & 56th Sts.
Philadelphia, Pa.

Engineering News-Record
330 W. 42nd St.
New York 36, N. Y.

Good Housekeeping
57th St. at 8th Ave.
New York 19, N. Y.

Highway Highlights
National Press Bldg.
Washington 4, D. C.

Highway Traffic
601-3 Republic Bldg.
Louisville 2, Ky.

Home & Highway
7447 Skokie Blvd.
Skokie, Ill.

Journal of American Insurance
20 N. Wacker Dr.
Chicago 6, Ill.

Journal of the American Medical Association
535 N. Dearborn
Chicago 10, Ill.

Look Magazine
488 Madison Ave.
New York 22, N. Y.

Metropolitan Transportation
Wheaton, Ill.

The New Outlook
15 W. 16th St.
New York 11, N. Y.

Popular Mechanics
200 E. Ontario
Chicago 11, Ill.

Saturday Evening Post
Independence Square
Philadelphia 5, Pa.

Taxicab Industry/Auto Rental News
200 W. 57th St.
New York 19, N. Y.

Traffic Digest and Review
1804 Hinman Ave.
Evanston, Ill.

Traffic Engineering
2029 K St., N. W.
Washington 6, D. C.

Book Reviews

Roads and Their Traffic by Ernest Davies. 1960. 352 pages. Blachie & Son, Limited. $12.00

This is a general book written on the subject of Traffic Engineering for the layman. This book attempts to close the gap between the traffic engineer and the layman. It makes no pretense of covering the whole field, which would be beyond the scope of a single volume, but it aims to describe the diverse functions of a traffic engineer, the methods he employs and the techniques he applies and to illustrate them with particular examples. The purpose is to provide an introduction to traffic engineering and thereby arouse a greater appreciation of its importance.

Experts from several countries have been brought together to write on those aspects of traffic engineering on which they are specialists. They have endeavored to avoid difficult technicalities so as to make their contributions comprehensible to laymen, but at the same time they write with sufficient authority and experience to make them also of value to the technician.

The subjects covered are confined to those which are the direct concern of the traffic engineer, such as urban traffic control, parking problems, road lighting, road and traffic research, and road safety.

—*Fred Potenza*, traffic engineer, traffic department, National Safety Council

The Psychology of Driving by Dr. A. R. Lauer. 324 pages. $10.50. Charles C. Thomas, Springfield, Ill.

Dr. A. R. Lauer, professor of psychology and director, driving research laboratory, Iowa State University, is well qualified to discuss the psychology of driving and the personality of the driver. His work, for many years, has inquired into the many facets of driver personality and their relationships to safe driving.

Although he has titled his book, *The Psychology of Driving*, he covers other related areas, such as, improvement of the drivers' licensing program, making license plates more legible, vehicular equipment, and arguments in defense of the youthful driver.

His discussions will provide meaningful guidance to traffic engineers, driver educators, driver license administrators, traffic law enforcement personnel, and others who must deal with the driver in his training, licensing and control. Further, developed hypotheses will challenge researchers to fill the gaps that exist in the study of driver behavior.

Dr. Lauer adequately develops the elements of personality related to the solution of the driving task and the means of measuring and influencing driver behavior, relates the role of the driving environment to behavior and suggests further studies of driving behavior as they relate to accident causation.

—*Elbert Hugunin*, specialist, traffic operations division, National Safety Council

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How to Keep Score

From Page 34

that the good supervisor or manager should watch for. His comments apply to industrial workers but they are equally applicable to professional drivers. The symptoms are:

1. Errors in performance of work.
2. Changes in everyday behavior and manners.
3. Changes in simple habits of a routine nature.
4. Near-accidents.

No less an authority than the noted mental health expert, Dr. Karl Menninger, chairman of the famous Menninger Foundation in Topeka, Kan., has stated, "Today, we would rather say that accident proneness is something that all of us have more or less, and more on one day than on another. The question is, what is your accident-proneness level today? It fluctuates with various factors. Resentments stemming from childhood, weariness, fatigue, a series of disappointments. And sometimes these feelings lead to an accident."

Does this mean that the busy small-fleet manager is expected to become a psychiatrist in addition to his other duties? Certainly not. But being aware that much sub-standard performance can have a psychological basis, he can be more understanding and effective in dealing with it.

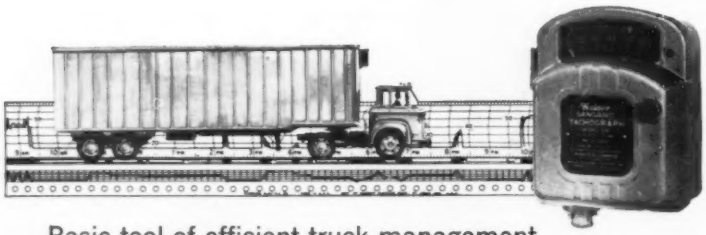
Dr. A. R. Lauer, professor of psychology, Iowa State University, a leading authority on driving behavior, offers some encouraging words in his recent book *The Psychology of Driving*. Summarizing many years of research, Lauer states, "Drivers seem to improve when approached about their difficulties, and when these are discussed with them in a semi-clinical way. It appears that one may compensate for his weaknesses and this may be the important factor in improving his record. An objective check of a driver and a careful and confidential discussion of certain deficiencies noted will result in improved driving behavior with a corresponding reduction in accidents. This phenomenon is being studied at the present time by certain states that have established what is called a driver improvement program. Here the problem cases are taken up by investigators and discussed in a frank manner."

To summarize the score-keeping phase of our better driving program—we must require reports of every accident; we must grade each accident preventable or non-preventable, and this information must be entered on each driver's record. But we should also do what we can to detect and correct sub-standard driving performance before an accident report is necessary.

How can you tell whether your drivers as a group are turning in average or better performance? This is important to know because you may be tolerating many more accidents than you should. If so, you will want to put more steam behind your better-driving program. The best way to keep track of the relative performance of your employes as a group is to join the National Fleet Safety Contest of the National Safety Council and submit monthly reports of your accidents and total vehicle miles. As a contestant, you will be grouped with similar fleets and will receive monthly bulletins showing the standing of all fleets in your group.

So far in our series, we have talked about setting up a standard of safe driving performance, showing our drivers how to meet this standard, and keeping score on how well drivers meet this standard.

There is one more essential element in our program. What does the small-business manager do for those drivers who have come through with flying colors and produced the kind of driving performance he has asked for? We will discuss the fine points of rewarding good performance in our next article, "Recognition Is the Pay Off."



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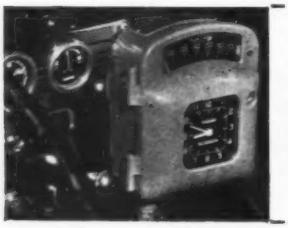

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New Look at Safety Councils

From Page 23

Georgia

Chattahoochee Valley Safety Council, West Point.

Indiana

Safety Council, Chamber of Commerce of Fort Wayne[1], and Indianapolis Safety Council, Indianapolis Chamber of Commerce[1].

Kentucky

Louisville Safety Council.

Louisiana

Greater Baton Rouge Safety Council; Calcasieu Area Safety Council, Lake Charles; Metropolitan New Orleans Safety Council, and Caddo Bossier Safety Council, Shreveport.

Maryland

Baltimore Safety Council.

Massachusetts

Massachusetts Safety Council, Boston (serving eastern Massachusetts); Safety Council of Western Massachusetts, Springfield, and Worcester County Safety Council.

Michigan

Greater Detroit Safety Council; Genesee County Traffic Safety Commission, Flint; Greater Grand Rapids Safety Council; Kalamazoo Area Safety Council; Safety Council of Greater Lansing; Greater Saginaw Safety Council, and Twin Cities Area Safety Council, St. Joseph.

Minnesota

Greater Minneapolis Safety Council.

Missouri

Greater Kansas City Area Safety Council; St. Joseph Safety Council, and The Safety Council of Greater St. Louis.

Nebraska

Omaha Safety Council.

New York

Greater New York Safety Council, New York City; Rochester Safety Council, Rochester Chamber of Commerce[1], and Greater Syracuse Safety Council of the Syracuse Chamber of Commerce[1].

Ohio

Greater Cincinnati Safety Council; Greater Cleveland Safety Council; Hamilton Safety Council; Safety Council of Middletown; Safety Council of Greater Youngstown.

Oklahoma

Oklahoma City Safety Council and Tulsa Area Safety Council.

Oregon

Portland Traffic Safety Commission[2].

Pennsylvania

Lehigh Valley Safety Council, Bethlehem; Greater Philadelphia Chapter, National Safety Council, Chamber of Commerce of Philadelphia[1], and Western Pennsylvania Safety Council, Pittsburgh.

South Dakota

Sioux Falls Safety Council.

Tennessee

Safety Council, Chattanooga Chamber of Commerce[1], and Memphis-Shelby County Safety Council.

Texas

Amarillo Traffic Commission[2]; Citizens' Traffic Commission, Dallas; Fort Worth Safety Council; Lubbock Citizens' Traffic Council and Greater Waco Safety Council.

Virginia

Richmond Area Safety Council.

Washington

Seattle-King County Safety Council and Spokane Area Safety Council.

Wisconsin

Milwaukee Safety Commission[2], and Racine County Safety Council.

British Columbia

Vancouver Traffic and Safety Council.

State Safety Organizations

California Traffic Safety Foundation, San Francisco; Connecticut Safety Commission[2], Hartford; Delaware Safety Council, Wilmington; Indiana Traffic Safety Foundation, Indianapolis; Louisiana Safety Association, Baton Rouge; Minnesota Safety Council, St. Paul; Mississippi Safety Council, Jackson; New Jersey State Safety Council, Newark; Oklahoma Safety Council, Oklahoma City; Texas Safety Association, Austin; Utah Safety Council, Salt Lake City; West Virginia Safety Council, Charleston; Wisconsin Council of Safety, Madison, and Alberta Safety Council, Edmonton, Canada.

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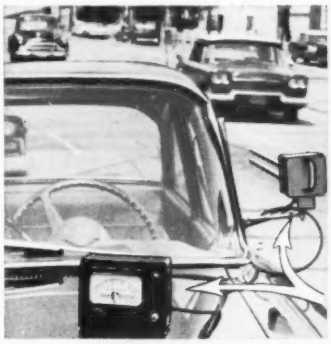
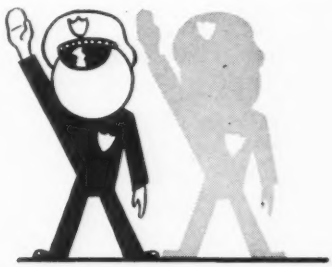
[1]Chamber of Commerce organization

[2]Official agency





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Last Crucial Moment

From Page 10

collision course beyond a point of no return before he knew that anything was going wrong. In spite of all that he did, there was no possibility of avoidance.

None of the persons killed in this accident were using seat belts. When other drivers go out of control or other vehicles fail while in motion, whoever is in the immediate vicinity is in extreme danger. In such cases, the only help possible is that given by deceleration protection. The term deceleration protection here is intended to mean door locks that resist opening, padded foam on the visors, padded foam on the dashboard, a recessed-post type steering wheel and seat belts for each separate occupant in the vehicle. This is a minimum.

If it were possible to cajole you or to embarrass or upset you in order to get you to have these devices installed and in use in your own vehicle, it would be worthwhile to take these steps. This is an urgent necessity: This judgment is made on the basis of our cases of automobile deaths, which show that in every instance where multiple deaths occurred, *at least one and often more than one of the persons who were killed could have survived if he had been restrained by a lap belt.* In 10 of our one-car cases where occupants were killed, we estimated that seven of the drivers could have survived if each had been wearing a seat belt. This is a very personal kind of statistic, *and it applies to you.* The means are at hand to apply the results of extensive engineering research and to have available the advantages at all times. You are doing yourself a serious injustice to fail to provide this protection for yourself. Those of you who are driver-education teachers have an additional responsibility. It is urgent in the public interest that you take the position of insuring that this type of information be made available to your students and that you encourage them to use the equipment on every occasion—even when they drive the car a single block.

Research

Some of the types of emergency training that could be suggested cannot be readily carried from the stage of concept to the stage of teaching activity. Some of these items require detailed operations research. Some of them require engineering design work to devise and manufacturing devices to help. All of them are important and some of them are urgent. Some of these are being approached by agencies working in cooperation with the National Safety Council. Others are waiting for someone to become interested enough in them to initiate research. The following list is presented, without attempting detailed description at this time, to indicate some of the teaching procedures which will be available in the future. They are:

1. **The panic stop.** This has been mentioned before. You might easily argue that this term should have been in the first list. While this is a defensible position, it is also true that under some panic-stop conditions, secondary emergency problems arise. Until these have been worked out, the panic stop should not be added to the teaching routine.

2. **Sudden brake loss** or sudden brake failure. At Harvard we see the circumstance of having lacerated brake hoses or disconnected lines. We see the results of the vibration of the metallic line against another metallic structure so that the fluid leaks out. Without any prior warning the car is without brakes. Controls are limited. We do not yet know how serious this problem is.

3. **Sudden power steering loss.** This refers to the type of thing that happens when you are going along in a perfectly orderly fashion, and the power steering fails and you don't know it. You start to steer and during that first moment your hands simply slip across the steering wheel. You have to recover, move back again, grip the steering and then start a recovery movement with added strength. It is during this critical period of finding the failure and developing the strength to override the power steering mechanism that jeopardy occurs.

4. **Returning to shoulder.** In many parts of the country we have shoulder along the highway made of sand or soil or stone. The shoulder surface may be two inches or three inches below that of the pavement. When the new driver runs over the edge of this, he may have a great deal of difficulty in getting back. Teaching him how to do this without running the risk of putting the vehicle out of control is important. One possible means is to decelerate without braking, and gain the roadway at low speed.

5. **Explosive decompression.** Explosive decompression in a tire is a term used in preference to the term blowouts, in an attempt to indicate the extreme rapidity with which the air loss is accomplished. We have demonstrated in our clinical work that to put your foot on the brake for a massive deceleration under the conditions of a blowout is asking for death, because whatever steering problem you have as a result of the tire failure will be magnified many times by the hard application of the brakes. Procedures for managing the deceleration and the steering control need to be worked out experimentally.

6. **Sign reading.** Sign reading was mentioned previously, and it was indicated that this is always important, especially where temporary arrangements are made, in detours on express highways, and under conditions of reduced vision such as fog. We see a number of deaths occurring under situations similar to this. The engineering means by which these situations should be handled are reasonably well known except to the construction people. For the rest of us, some type of training is needed.

7. **Vehicle control.** What should the passenger do when the driver of his vehicle obviously loses control? We have one case in which the passenger was obviously trying to give aid. The vehicle continued out of control and hit a tree and the passenger was killed. What his action should be under conditions of fainting, seizure or sleep is a complete unknown.

8. **Skidding.** The vehicle which goes into a skid is in a serious situation. Sometimes a person can go into a controlled skid and avoid some other type of problem by its use. This takes a degree of skill which is beyond the range of most of us. What about the ordinary situation when you lose traction on a wet road? Or when you think you can stop on ice or snow and you find you can't, what do you

do? These procedures are being tackled by the Committee on Winter Driving Hazards of the National Safety Council and very soon they will have some recommendations to make. One of the important things here, of course, is careful evaluation of the type of equipment in use on the vehicle respecting winter driving hazards.

9. **Missiles.** What about the situation in which the other driver shows signs of being on the collision course, but you don't know what to do about it? Assume that he is intoxicated or asleep. Procedures need to be worked out to adequately handle this matter.

The idea of clicking your lights up and down could hardly be more foolish. If a driver has gone to sleep at the wheel with his own car all around him and his own engine and headlamps going, it is almost certain that *your* headlamps are not going to wake him up. It is suggested that the horn be used in an attempt to wake him up. In the meantime, pulling over to your own side of the road protects your liability interests. Other work on this problem needs to be done.

10. **Pedestrians.** A short time ago a newspaper writer phoned and asked my opinion about the appropriate action of a driver when a dog runs into the street in front of him. His question included the comment that he had checked with the local safety council. The advice given was that they did not recommend that the driver make any attempt to avoid the dog.

My own reaction to this was very simple. This is a very adequate training ground. We have an important pedestrian death problem in this country. Nearly 8,000 pedestrians are killed by automobiles in the course of the year. When a dog runs into the street, you have an opportunity to use the situation as a training ground for avoiding the pedestrian. The actions of the dog and the pedestrian are probably equally unpredictable, and this gives you a chance to develop emergency skills. If you can avoid the dog, you can also very probably avoid the child.

This statement of principle is not a solution to the problem of how a driver should behave with respect to pedestrian deceleration, but until experimental work is accomplished to set up the means by which the pedestrian avoidance procedure can be established, this philosophy is certainly a useful one. At the present time we don't even use a horn to warn a pedestrian of a collision course. The principles of protection applied for occupants ought to be extended to design work for pedestrian protection also.

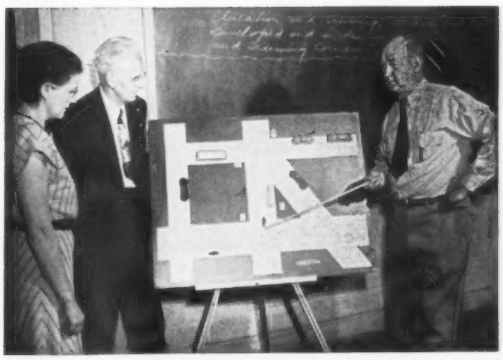
Simulation

Considerable interest has been aroused in the development and application of simulators in the study of problems of drivers. Feasibility studies have been completed and designs have been initiated. As a research tool a "Link" trainer for automobile study could hardly be surpassed in value. As an applications tool the trainer could make vast contributions to the solution of problems of training drivers for emergencies.

Summing Up

Several items have been suggested here based upon observed emergencies which have occurred under conditions of non-fatal-injury and fatal-injury producing accidents, in or by automotive vehicles. The premise is that when emergencies occur there is not time to work out a means to avoid the situation. Therefore, the skill must be developed beforehand and brought to the occasion so that it can be used very quickly. To implement this, it is useful to say that in many of our cases we estimate that if either driver had six feet of additional space in one direction or another, or if any driver had two-tenths of a second, or if any combination of drivers had two-tenths of a second, the collision which was involved in producing one or more deaths would have been avoided.

Turn Page



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IAC Sounding Board
News of Interest in the Field of Noise Control

New Sound Meter-Analyzer Helps Enforce Motor Vehicle Noise Control

Sketch shows the Rudmose Sound Analyzer checking muffler.

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Under these circumstances time is not available. The skill has to be ready and capable of instant use when the emergency situation arises.

Many articles have been written concerning the capacity of the school to produce a better member of the travelling community through driver education. Some of the critics of driver education have insisted that driver education is not paying its way and is not proving its worth. We all know that this is a partisan point of view that has motives other than public safety and sound driving in mind. It is a point of view which cannot be defended.

Some of us, however, are acutely aware that driver education does not go far enough to accomplish its goals. Superiority can be shown when the training program and education program is carried to a higher degree of accomplishment. One of the most obvious areas for improvement is training in emergency procedures so that when the emergency arises the driver will bring the skill to the occasion of need.

When I see in the mortuary a driver who had his first blowout on the last day of his life, I am convinced that we must revise driver education to provide this emergency training — and that we must do it without delay.

Legislative Hopper

From Page 26

tem—passed Senate; amended, passed House, Senate concurs in House amendment.

Texas—H. 398—increases bus speed limit to 65 m.p.h. during day and 55 m.p.h. at night—passed both Houses.

Wisconsin—H. 133—fixes speed limits on multi-lane, divided highways at 70 m.p.h. during day and 60 m.p.h. at night—passed House; amended, passed Senate.

Executive Action

Maine H. 716—allows commercial vehicle the same speed limits as pleasure automobiles—approved.

Michigan—H. 9—fixes 70 m.p.h. speed limit during day and 60 m.p.h speed limit at night on freeways—approved.

Oklahoma H. 782—fixes 50 m.p.h. maximum speed limit for trucks and tractor semi-trailer combinations of 48,000 pounds or more—approved.

NEW... SAFETY EQUIPMENT

Publication of product announcements in this section should not be construed as endorsement or approval by the National Safety Council.

Portable Traffic Warning Device

Here is an inflatable warning device designed to be carried in the car for use while changing tires or making car repairs on the road. This luminous Saf-T-Gard when fully inflated is 26" high and plainly visible, even at night. It cannot be blown over or knocked down. The cone-shaped device is intended to form an integral unit in the equipment of every car and truck.

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The Frye Portable Aspirator has been especially developed to provide an emergency suction unit suitable for ambulances, squad cars and rescue units. This compact device weighs only 18½ lbs. and is 12" high, 10" wide and 8" deep. It operates by plugging into the cigarette lighter socket of any motor vehicle equipped with a 12-volt battery.

Before beginning artificial respiration or administering oxygen, the attendant must first determine if the accident victim has an open airway. Should his throat be clogged by mucus, blood or vomitted matter, it must be removed immediately by suction. This important emergency procedure may be performed on the spot with the Frye Aspirator.

The Frye Portable Aspirator is furnished with a suction gauge and regulating valve; 32 oz. suction bottle, a "Yankauer" suction tube and 14 feet of cord. The sturdy case is finished with Sklar baked enamel. J. SKLAR MANUFACTURING COMPANY, 38-04 WOODSIDE AVENUE, LONG ISLAND CITY 4, N. Y. (Item 43)

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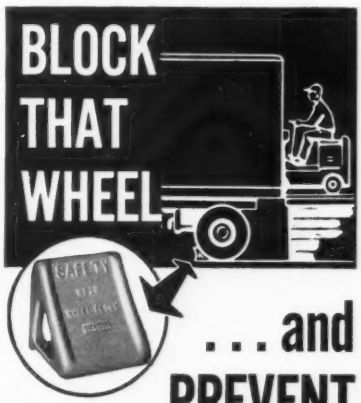
SAFETY AND INSURANCE—Twenty-six years of safety, personnel and insurance experience with one company. Has handled all functions involved in company's personnel, safety and insurance work. As safety director, conducted meetings; administered award program; supervised investigation of on-the-spot, highway, city operation and terminal accidents; maintained all records required by the ICC; represented the company at industry and association safety functions. Desires employment in Chicago area. Résumé on request.

(Inquiries should be directed to the Motor Transport. Department, National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.)



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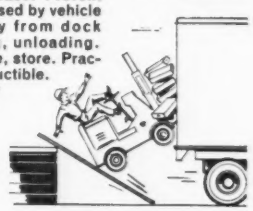

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Circle Item No. 13—Reader Service Card

What They Think in Wisconsin

A recent poll by the *Wisconsin Traffic Safety Reporter* disclosed some interesting opinions on current topics. A questionnaire was sent to about 5,000 Wisconsin readers of the bulletin, whose readership includes newspaper editors, radio and television stations, school administrators, judges, highway commissioners, village presidents, mayors and city managers, county traffic authorities and local police departments, state legislators, truck and bus fleet supervisors and a number of individual citizens. There were 1,300 replies.

Results of the poll were tabulated as follows:

Should the Wisconsin State Patrol be authorized to use airplanes to patrol rural highways and enforce state traffic laws? Yes, 70.7 per cent; no, 24.7 per cent; no opinion, 4.6 per cent.

Should the state patrol be enlarged? Yes, 69 per cent; no, 24.3 per cent; no opinion, 6.7 per cent.

Should the Wisconsin point system be made more strict? Yes, 49.6 per cent; no, 45.3 per cent; no opinion, 5.1 per cent.

Should Wisconsin have an implied consent law? Yes, 72.8 per cent; no, 23.1 per cent; no opinion, 4.1 per cent.

Do you favor lowering the "evidence level" of blood alcohol from .15 to .10 per cent? Yes, 49 per cent; no, 39.8 per cent; no opinion, 11.2 per cent.

Do you favor a three-day minimum jail sentence for drivers convicted of exceeding the speed limit by more than 20 mph? Yes, 37.7 per cent; no, 56.5 per cent; no opinion, 5.8 per cent.

Do you favor a five-day minimum jail sentence for drivers convicted of driving while their license is revoked? Yes, 85.4 per cent; no, 11.1 per cent; no opinion, 3.5 per cent.

News From Capitol Hill

From page 21

to its regulations "to establish more definitive and comprehensive standards for safe shipment of special nuclear materials." The Commission also announced it was "undertaking a program of educating carriers on physical characteristics and on safe methods and procedures employed in the transportation of radioactive materials."

The deadline has passed for compliance with an Interstate Commerce Commission regulation requiring buses and trucks in interstate commerce to have equipment providing for simultaneous flashing of front and rear-turn signals in event of a breakdown on the road.

The ICC also conducted an extensive road safety check of motor vehicles carrying migrant workers north, to help assure safe transportation for these workers.

In various motor carrier accident investigation reports, the ICC called attention to possible criminal prosecutions for failure of motor carriers to provide proper inspection and maintenance of their vehicles, and the need for education of drivers in the proper parking of vehicles to avoid their rolling away while unattended.

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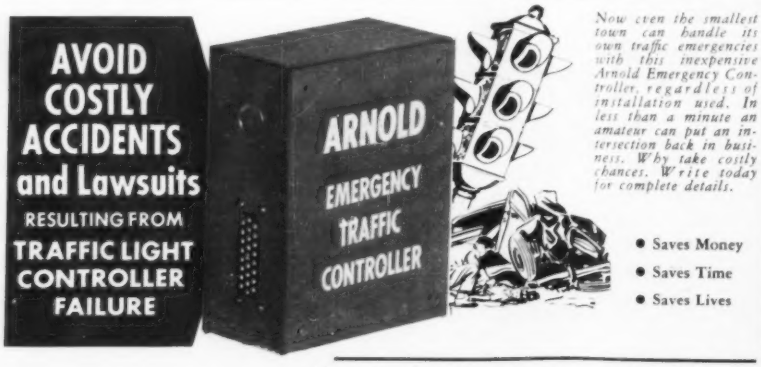

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Although the Council does not test or examine the products advertised or mentioned in the editorial features, staff engineers and technicians review all product information in an effort to determine that descriptions and performance claims are accurate. It should not be construed, however, that commercial products are approved or endorsed by the National Safety Council.

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